ASHOKRAO MANE POLYTECHNIC

DEPARTMENT OF COMPUTER ENGINEERING

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THEME: "DATA SCIENCE INSIGHTS"

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- Mrs.G.A.Ghodake
- Ms.S.I.Mulla
- Mr.Diptesh Dange
- Mr.Pruthesh Upadhye

About Institute

Having accomplished high reputation in Western part of Maharashtra state as on today, it is imperative to look back to the development of ASHOKRAO MANE POLYTECHNIC on time scale from its just born state in the year 2008. With a view to make available enormous opportunities for the rural masses in higher technical education, we have well connected place at Vathar tarf Vadgaon, District – Kolhapur. In 2008, the year of its inception, the college started more or less in just a make shift type of structure. Despite of obvious hardships of infancy, the management, went ahead with constructing a full fledged building at once. With the fastest speed, the construction was completed at the start of the year 2008. The classes had in fact started in the new building since academic year 2008-09.

Institute Vision

Achieve excellence in quality technical education to create competent technocrats with ethical and social responsibilities for the betterment of society.

Institute Mission

M1 : To provide a scholarly and vibrant learning environment that enables students to achieve professional growth.

M2 : To impart quality technical education with emerging technology to fulfill industrial requirements

M3 : To develop culture for holistic development of an individual including social as well as ethical responsibilities.

M4 : To strengthen relationship with industries for empowering the students to work in adverse conditions.

About Department

Department of Computer Engineering in Ashokrao Mane Polytechnic, Vathar tarf Vadgaon is established in 2008.The department has evolved over the years to become one of the active department of this college in teaching and providing services to students, The focus of department's teaching activity is on advanced computational methods for modeling, analyzing and solving complex task in technology and science. The curriculums provided by our department are flexible and provide opportunities for students to emphasize specific areas of interest through their chooses of appropriate measure and technical elective .

To create academic environment at departmental level we have a well maintained library with funds from management. The department has well equipped laboratories with latest hardware and software. The laboratory has 10KVA power backup facility for each computer and 300 MBPS airtel lease line.

Department Vision

An eminent program to meet the growing needs of IT industry & society.

Department Mission

M1 : Imparting quality education through a well-designed curriculum which improves basic and disciplinary knowledge of the subject.

M2 : To train the students to design, develop and test emerging software system for industry & society.

M3 : To inculcate the spirit of teamwork, innovation and professionalism among the students.

M4 : To train students with hands on and soft skills for their future jobs, higher studies and to be an entrepreneur.

MESSAGE

A Message from the Principal's Desk

A Message from the HOD's Desk

I am very happy to note that the Department of Computer Engineering of Ashokrao Mane Polytechnic Vathar tarf Vadgaon, is releasing its Newsletter enumerating the various activities and achievements of their faculty and students.

Computer Engineering is a versatile and ever green branch of engineering. A computer engineer is a professional who creates physical components in devices such as consumer electronics, routers, data storage devices, cellphones, medical devices, supercomputers, communication systems and vehicles. I hope this newsletter will serve the purpose of reflecting all activities of department and it will inspire others to do their best. I congratulate all the students who have put their efforts in bringing this newsletter issue and also appreciate HOD and all faculty members for motivating their students towards this fulfilment. I wish each one of them in the departments success in all their endeavors.

"I feel very fortunate to have someone of him credentials & background leading our teaching & learning department."

This newsletter has been named to pay tribute to his contribution to the field of Science &Engineering. This newsletter is an attempt to show case the department profile and its technical and non-technical activities for overall growth of students. It is an attempt to encourage both faculties and Students to publish their technical work and share information about their extra-curricular activities. I thank our Principal and the management for helping and guiding me in bringing out this newsletter. I also thank my students and colleagues for their help and support during this work.

"The best leader is the one who has sense enough to pick good men to do what he wants done, and the self-restraint to keep from meddling with them while they do it." Department is committed to fulfill vision and follow the mission for same. We are now ready for National Board of Accreditation (NBA).

I wish a best luck to all my students and my faculty members for their bright career, and thank to their efforts towards department and institute.

EXPERT LECTURE ON "PYTHON WITH FRAMEWORK AND FULL STACK DEVELOPMENT"

The Department of Computer Engineering with association with COMPESA arranged expert lecture on 9th February 2024 at 12.00 pm onwards. Lecture topic was "Python With Framework And Full Stack Development" and Resource person was Miss.Agnes Suzan .

Expert Addressing the Students

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EXPERT LECTURE ON "PROJECT MANAGEMENT IN SOFTWARE INDUSTRY".

The Department of Computer Engineering with association with COMPESA arranged expert lecture on 25th February 2024 at 11.00 am onwards. Lecture topic was "Project Management in Software Industry" and Resource person was Mr. Ajeet Pattar.

The expert for Project Management in Software Industry talk session start with some project idea and project planning tips that he interact with all second & last year students about current project topics , technologies used for projects, how to overcome faults in project and how to get dream college or company after diploma engineering.

Expert Lecture

Information given to students related to soft skill by "Mr. Maheshkumar S.Lakade."

The Department of Computer Engineering with association with COMPESA arranged expert lecture on 13th February 2024 at 02.00 pm onwards. Lecture topic was "Personality Development and Soft Skill" and Resource person was Mr. Maheshkumar S. Lakade.

The expert for session start with Student interaction and students problems, he has interact with all second & last year students about current problems in industries , how to overcome faults in project and how to get dream college or company after diploma engineering. All teaching and non-teaching staff of computer engineering department was present for the session.

ORGANIZED EVENT'S

"Reflex - 2K24"

- ## Paper Presentation

Felicitation of Expert Mr. Ajit Ratankar Pradnyavant for Computer Engineering Department by Principal of Prof. Y.R.Gurav of Ashokrao Mane Polytechnic Vathar tarf Vadgaon.
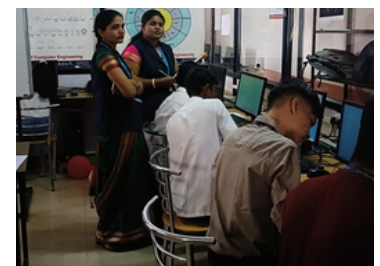

Felicitation of Expert Mrs.Swati Suryakant Karande by of Computer Principal of Ashokrao Mane Polytechnic Prof.Y.R.Gurav.

- ## Blind Programming

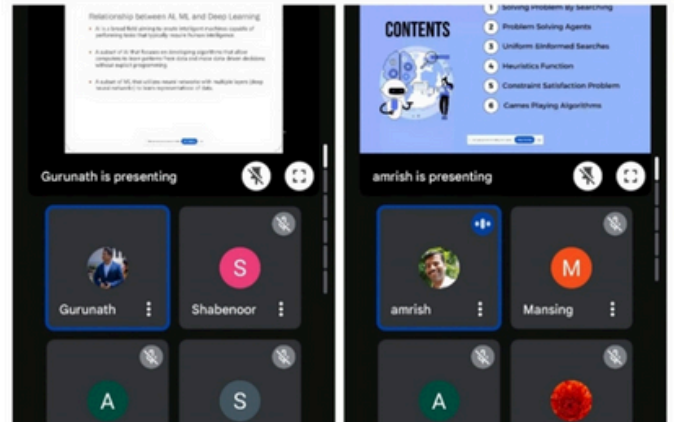

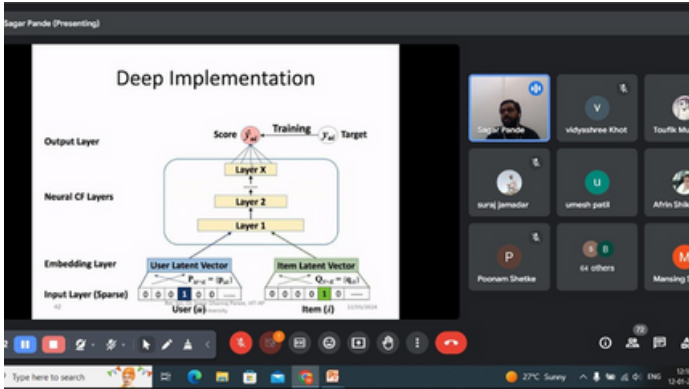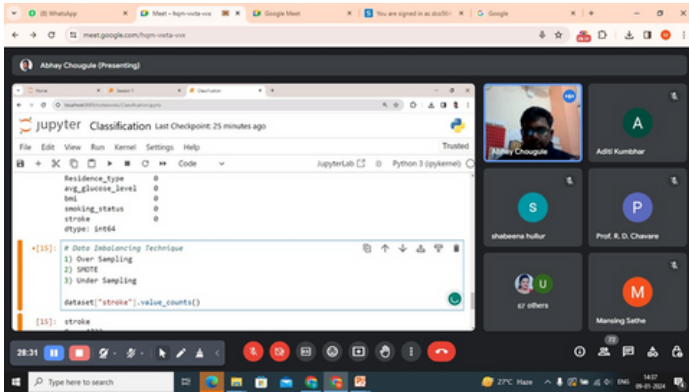1st Round of Aptitude in Blind Programming "REFLEX 2K24"

Some staff members doing Unbased Judging of Student Performance in Blind Programming event.


Staff and Student Volunteer Managing Blind Programming Technical Event in "REFLEX 2K24"

Faculty Development Program

A one-week Faculty Development program on Artificial Intelligence and Machine Learning was conducted by the Computer Engineering department from January 8th to January 12th, 2024, at Ashokrao Mane Polytechnic Vathar, where various AI & ML related subtopics were discussed in detail by academic and industry experts in the field. Faculty development program started with inauguration speech by Mr. S.A.Lakade, HOD of Computer department and Principal Prof.Y.RGurav. Agenda of One week Faculty Development program was given by Mrs.A.A.Kumbhar

Photos of FDP Event

FDP Brochure

Sample E-Certificate
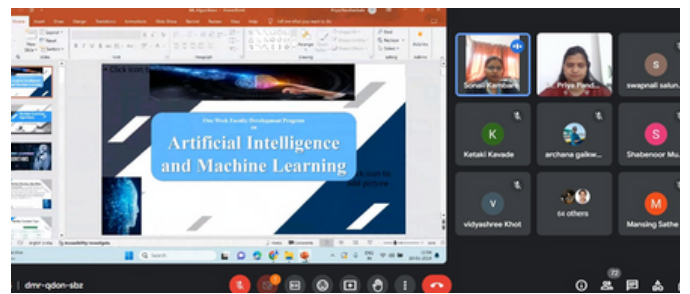
Traditional Day

Enthusiastic and Awesome performance on Traditional Day on theme-
SHIV RAJYABHISHEK SOHALA

Cultural Events

Grand Annual Social Function
Kalavishkar 2K24

Computer Department Received General Championship Award by Academic Year 2023 - 24 by the hands of Hon.Mr.Yashwant Gosavi.

Miss.Vaidhai Chougale TYCO Student received best Singer award by Principal Hon.Y.R.Gurav

Computer Department Won the best Perfomance award of Traditional Day by Principal Hon.Y.R.Gurav.

Best Dance Performance in Kalavishkar 2K24.

Students made the hattrick of General Championship.

Annual Sport's 2K24
Proud Moment

Team Sprit, Team Work always bring success and Students of our Department Proved it.

The Students of Computer Engineering Department were participated in different Sports Organized at Ashokrao Mane Polytechnic Vathar Tarf Vadgaon.

Kabaddi Girls winner Team

The Annual Sports 2024 for the Computer Department is an upcoming event designed to encourage physical activity and team spirit among students and staff. Scheduled for later this year, the event will feature various sports such as football, Carrom, badminton, and track and field. Participants will compete in teams, representing different classes or groups within the department. The event aims to foster camaraderie, enhance physical fitness, and provide a break from academic routines.

Volleyball Match

Chess

◆ **Faculty Speak**

Data Science Insights

Data Science insights allow enterprises to succeed, make better decisions, and increase customer satisfaction. Insights in data science are the deep understanding acquired by an individual or organization as a result of examining information on a particular subject. The analysis of this information provides data science insights that assist businesses in making informed decisions while also minimizing the chances associated with the traditional trial-and-error testing method. This in-depth understanding allows organizations to make better judgments than they could if they relied entirely on gut sense.

Data insights refers to the deep understanding an individual or organization gains from analyzing information on a particular issue. This deep understanding helps organizations make better decisions than by relying on gut instinct.

Miss. Supriya R. Chougale

Why Data Science Insights?

Data science provides a foundation for making informed decisions by analyzing historical data and identifying trends and patterns.It allows organizations to forecast future trends and behaviors, helping them to plan and strategy effectively.

Data-driven insights can lead to innovative products, services, and processes by identifying unmet needs and new opportunities. Data science enables personalized customer experiences by analyzing customer data to understand preferences and behaviors

Understanding customer behavior and preferences through data helps in creating better marketing strategies and improving customer satisfaction.

Overall, data science insights drive better decision-making, operational efficiencies, and innovative solutions, which are essential for success in today's data-driven world.

DATA SCIENCE INSIGHTS

Faculty Speak

Big Data Analytics

Mrs. G.A.Ghodake

Big data analytics refers to the systematic processing and analysis of large amounts of data and complex data sets, known as big data, to extract valuable insights. Big data analytics allows for the uncovering of trends, patterns and correlations in large amounts of raw data to help analysts make data-informed decisions. This process allows organizations to leverage the exponentially growing data generated from diverse sources, including internet-of-things (IoT) sensors, social media, financial transactions and smart devices to derive actionable intelligence through advanced analytic techniques.

Uses of Big Data:

1.Business Analytics: Big data enables organizations to analyze customer behavior, market trends, and operational performance to optimize decision-making, improve customer experiences, and drive innovation.

2. Telecommunications: Big data assists in network optimization, customer churn prediction, and service quality improvement by analyzing call detail records, network traffic, and customer usage patterns.

3. Healthcare and Life Sciences: Big data supports personalized medicine, clinical decision-making, drug discovery, and epidemiological studies by integrating and analyzing large volumes of patient data, genomic information, and medical research.

4.Retail and E-commerce: Big data enables personalized marketing, demand forecasting, inventory management, and customer segmentation based on purchase history, browsing behavior, and social media interactions.

5. Energy and Utilities: Big data supports smart grid management, energy consumption optimization, and predictive maintenance of infrastructure through analysis of sensor data, weather patterns, and consumption trends.

◆ Faculty speak

Artificial Intelligence and Machine Learinig

Mrs.S.I.Mulla

Artificial Intelligence (AI) refers to the simulation of human intelligence in machines that are programmed to think and learn like humans. It encompasses a wide range of techniques and approaches aimed at enabling machines to perform tasks that typically require human intelligence. AI includes areas such as natural language processing, computer vision, robotics, and expert systems. The goal of AI is to create systems that can perceive their environment, reason about situations, and take appropriate actions to achieve specific goals. AI techniques range from symbolic reasoning and knowledge representation to statistical methods and machine learning
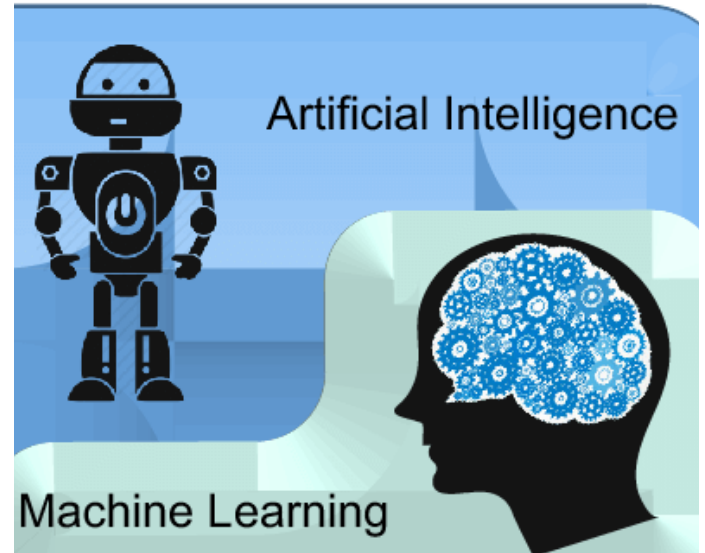
Why is Artificial Intelligence?

- Automation: AI enables automation of repetitive tasks, reducing human effort and errors in routine operations.

- Efficiency: AI systems can process vast amounts of data quickly and accurately, leading to faster decision-making and problem-solving.

- Innovation: AI drives innovation by enabling the development of new products, services, and business models that were previously impractical or impossible.

Why is Machine Learning?

- Data Mining and Pattern Recognition : ML algorithms can sift through large volumes of data to discover patterns and extract valuable insights that may not be apparent to humans.

- Optimization : ML algorithms optimize processes and operations in various industries, allocation, leading to cost savings and improved efficiency.

- Natural Language Processing (NLP) : ML techniques enable computers to understand and generate human language

Machine Learning (ML) is a subset of AI focused on developing algorithms and statistical models that computer systems use to progressively improve their performance on a specific task. ML enables computers to learn from data, identify patterns, and make decisions without explicit programming. It involves techniques such as supervised learning, unsupervised learning, and reinforcement learning. The goal of ML is to enable machines to learn from experience and improve their performance over time.

Students speak

Natural Language Processing

Mr.Pruthesh Upadhye

Natural Language Processing (NLP) is a branch of artificial intelligence (AI) that focuses on enabling computers to understand, interpret, and generate human language in a way that is both meaningful and useful. It involves the application of computational techniques to analyze and model natural language data, with the goal of automating tasks such as language translation, sentiment analysis, speech recognition, and more. NLP combines techniques from linguistics, computer science, and machine learning to bridge the gap between human communication and computer understanding.

Data trainable models in Natural Language Processing (NLP) :

BERT (Bidirectional Encoder Representations from Transformers):

- Developed by Google, BERT is designed to understand the context of a word in search queries.
- It uses a transformer architecture and is pre-trained on a large corpus of text data.

Fine-tuning BERT for a specific task, such as sentiment analysis, involves the following steps:

1. Prepare the Dataset: Collect and preprocess the dataset, ensuring it is in the format required by BERT.
2. Load Pre-trained BERT: Use a pre-trained BERT model from libraries such as Hugging Face's Transformers.
3. Add Task-Specific Layers: Add additional layers (e.g., a fully connected layer) to adapt BERT for the specific task.
4. Train the Model: Train the model on the labeled dataset, adjusting the pre-trained weights to learn task-specific patterns.
5. Evaluate the Model: Assess the model's performance on a validation set and fine-tune hyperparameters as needed.

GPT (Generative Pre-trained Transformer):

- Developed by OpenAI, GPT is designed for generating human-like text.

Evolution of GPT Models:

- GPT-1: Released in 2018, GPT-1 had 117 million parameters. It demonstrated the effectiveness of unsupervised pre-training followed by supervised fine-tuning.

- GPT-2: Released in 2019, GPT-2 significantly improved upon its predecessor with 1.5 billion parameters. It gained attention for its ability to generate highly coherent and contextually accurate text, raising concerns about potential misuse.

- GPT-3: Released in 2020, GPT-3 is one of the most well-known models, featuring 175 billion parameters. Its scale enables it to perform a wide range of tasks with little to no fine-tuning, often referred to as "few-shot" or "zero-shot" learning.

- GPT-4: Released in 2023, GPT-4 further improved upon GPT-3 with enhancements in understanding context, generating more accurate and relevant responses, and handling a wider variety of tasks. It also incorporated advancements in reducing biases and improving safety.

Students speak

Data Mining

Mr.Diptesh Dange

Data mining is the process of searching and analyzing a large batch of raw data in order to identify patterns and extract useful information. Data mining is the process of analyzing large datasets to discover patterns, correlations, trends, and useful information. It involves several steps and techniques to extract meaningful insights from raw data. The main objectives of data mining are to find previously unknown patterns, make predictions, and support decision-making processes.

Key Steps in Data Mining:

1.Data mining is the process of analyzing a large batch of information to discern trends and patterns

2.Data mining can be used by corporations for everything from learning about what customers are interested in or want to buy to fraud detection and spam filtering.

3.Data mining programs break down patterns and connections in data based on what information users request or provide.

4.Social media companies use data mining techniques to commodify their users in order to generate profit.

5.This use of data mining has come under criticism as users are often unaware of the data mining happening with their personal information, especially when it is used to influence preferences.

6.Knowledge Presentation: Presenting the results in an understandable and actionable format, often through reports, charts, or dashboards.

How data mining works?

Data mining involves exploring and analyzing large blocks of information to glean meaningful patterns and trends. It is used in credit risk management, fraud detection, and spam filtering. It also is a market research tool that helps reveal the sentiment or opinions of a given group of people.

Applications of Data Mining:

- Marketing: Customer segmentation, targeted advertising, and market basket analysis.

- Finance: Fraud detection, credit scoring, and risk management.

- Healthcare: Predictive analytics for patient outcomes, disease diagnosis, and treatment optimization.

- Retail: Inventory management, sales forecasting, and customer behavior analysis.

- Social Media: Sentiment analysis, trend analysis, and user behavior tracking.

Students' Achievements

"Diptesh Dange, a third-year student, achieved the best outgoing performance in Computer Engineering."
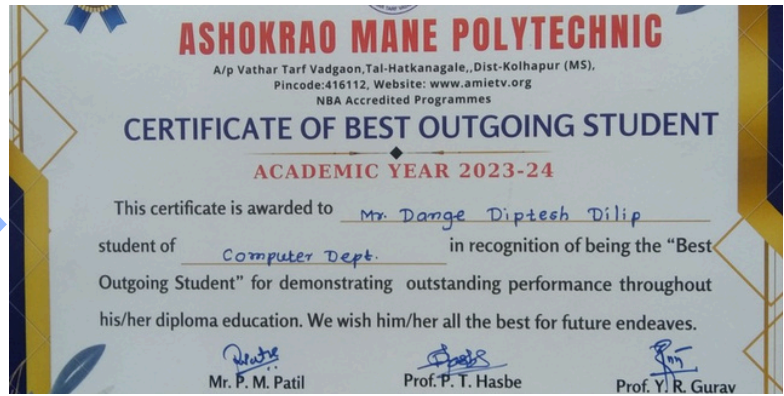
Third Year students of Computer Engineering got placed in EXPEDITER Software solutions

"State-level technical presentation in the Computer Department."

Students' Performance in various Technical Competitions.

NSS Activity

Blood Donation Camp

On the Occasion of "Birthday of Hon. Sou. Manisha Mane Vhinisaheb ",Member ,ZP Kolhapur , NSS committee of Ashokrao Mane Polytechnic, Vathar has arranged the "Blood Donation Camp" on 29/1/2024 with cooperation of Sanjeevan Blood Center Kolhapur.

The blood donation camp was inaugurated by Hon. Principal Prof. Y.R.Gurav sir, all HOD's and NSS coordinator Mr.M.S.Patil ,departmental coordinator and staff were present.

Nearby 52 students and staff participated in the camp spontaneously, By donating their blood they express their gratitude towards the society. The event gave complete satisfaction and immense pleasure to all participants.

The event is done by cooperation of the entire NSS committee member, staff and students By organizing such blood donation camp Ashokrao Mane Polytechnic ,Vathar had made a great contribution for social work.

One drop of blood can save many lives students partcipation in social activity arranged by NSS.

STUDENTS ACHIEVEMENT

Our Glorious Topper's in summer 2024 exam of MSBTE

Third Year

**Diptesh Dilip Dange
(89.44%)**

**PATIL AKASH VIDYADHAR
(89.22%)**

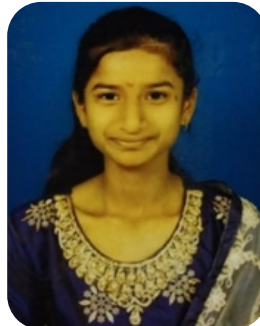**Niharika Shivprakash Tiwari
(88.11%)**

Second Year

**Pruthesh Neminath Upadhye
95.73%**

**Shravani Vilas Patil
95.20%**

**Vaishnavi Prakash Gurav
94.27%**

Our Prestigious Placement's

Departmental Placements in MNC - KPIT,Pune .

Kishor Dholi

Tanuja Jadhav

Jaydip Patil

Srushti Patil

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Success Story

Mr. Sanket Sarjerao Patil our alumni from 2019-20 pass out batch currently working in " WIPRO" company as a junior S/W Engineer . The Computer Science program has taught me fundamental approach, evaluate and solve problems. The interaction with the professors and their sincere desire for my success was truly invaluable. As a direct result of their encouragement, I am working at WIPRO. there, I am able to apply and build upon what I had been taught. With both classroom and related work experience, I am able to secure a permanent position in a company. Overall, I feel my time at AMP was a worthwhile investment for both personal and professional development."

Sanket Sarjerao Patil
TYCO
Alumni 2019 - 20

Theme for next Issue

Cyber Security Need of Generation