Anshul Anilkumar Mundakatil

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PROFILE

Dedicated and detail-oriented graduate with a Bachelor's in Computer Science and Engineering, currently pursuing a Master's in General Engineering (Interdisciplinary Engineering) with a focus on Machine Learning and Data Science at San Jose State University (SJSU). Having a strong background as a Systems Engineer at Tata Consultancy Services (TCS), I bring hands-on experience in machine learning, coupled with expertise in Python and machine learning libraries. My goal is to continue expanding my knowledge, forge valuable professional connections, and foster personal growth in the field of Machine Learning and Data Science.

EDUCATION

Master of Science General Engineering, San José State University 08/2023 – present
Relevant Coursework: *Artificial Intelligence and Data Engineering, Artificial Intelligence and Cybersecurity, Engineering Analysis, AI Tools and Practice for Systems Engineering, Systems Engineering, Reinforcement Learning and Large Scale Models.*

B.Tech Compter Science and Engineering, SRM Institute of Science and Technology 07/2017 - 06/2021
GPA: 3.54
Relevant Coursework: *Machine Learning, Artificial Intelligence, Python Programming, Database Management Systems, Data Structures and algorithms, Java, Object oriented programming using C++, Web programming.*

PROFESSIONAL EXPERIENCE

eCampus, San Jose State University, *Student Assistant* 10/2/2023 - Present
- Provide technical assistance to support online learning programs and projects for SJSU faculty and students.
- Assist in design, development, and maintenance of eCampus websites, and create documents and reports to support eCampus projects.

Tata Consultancy Services, Hyderabad, India, *Systems Engineer* 07/01/2021 - 07/26/2023
- Designed and optimized SharePoint 2013 and SharePoint Online sites, enhancing user experience.
- Developed workflows using Nintex and Power Automate, ensuring efficient processes.
- Created forms on Power Apps and Infopath 2013, augmenting migration solutions.
- Contributed to the migration of data and solutions to SharePoint Online, boosting productivity.
- Produced insightful reports on Power BI, providing data-driven insights.
- Created detailed documentation, video tutorials (KTs), and presentations.

Gujarat Alkalies and Chemicals Limited, Vadodara, India, *IT Intern* 06/14/2019 - 06/28/2019
- Developed the Employee Module project, demonstrating proficiency in key skills such as database management systems (DBMS), SAP, ABAP, fundamental Java scripting, and data analytics.
- Effectively employed SQL commands to manipulate data and actively contributed to the maintenance and management of the company's database.

PROJECTS

Cybersecurity in Edge Computing using Machine Learning/Artificial Intelligence 08/2023 – present
- Developed a cybersecurity framework using ML and AI techniques to fortify Edge Computing environments against critical cyber threats.
- Utilized Random Forest and Neural Networks to detect malware in Android/Edge devices, identify DDoS attacks in cloud platforms/base stations, and perform intrusion detection in virtual machines via Virtual Machine Introspection (VMI), encompassing edge computing components.
- Received recognition from the professor, offered to delve into an advanced level of the project due to demonstrated competence and dedication.

Artificial Intelligence and Data Engineering Projects 08/2023 – 12/2023
Informative Search using A* Algorithm and Comparison to Uninformed Search Methods
- Achieved Maze Solving Proficiency (A*, Dijkstra, BFS) and Heuristic Analysis for 25x25 mazes.

MDP-Based Path Planning and Optimization
- Applied Sequential Decision Making with MDPs for Optimal Path Discovery (Value Iteration, Policy Iteration) in maze environments and improved efficiency via broadcasting.

Sequential Decision Making in Pendulum Dynamics with LQR Control
- Enhanced Pendulum Control System by Modeling Dynamics and Implementing LQR for Optimal Control, exploring Weighting Matrices.

Information-bottleneck-method
- Implemented the Information Bottleneck algorithm efficiently utilizing broadcasting techniques to optimize the compression of data.

Dysarthric Speech Classification(Major Project) 08/2020 – 06/2021
- Developed an automated solution for recognizing dysarthric voices with significantly improved accuracy compared to traditional methods.
- Combined QCP GIF-extracted glottal features with openSMILE-derived acoustic features, leveraging machine learning techniques.
- Trained Support Vector Machines (SVM) as part of the machine learning pipeline for precise voice classification.
- Implemented Sequential Forward Feature Selection (SFFS) to optimize the selection of relevant features, further enhancing the model's accuracy.
- Demonstrated the model's effectiveness, particularly with a 94.13% accuracy rate in classifying dysarthric voices.

Effect of holidays on food expenditure 06/2020 – 07/2020
- Researched the relationship between holidays and food spending in Ann Arbor, employing data analysis and visualization to gauge their impact.
- Utilized data conversion, cleaning techniques, and Python data visualization for effective dataset preparation and to convey insights effectively.

AWARDS, CERTIFICATIONS AND VOLUNTEER EXPERIENCE

Certifications:
- PL 900: Microsoft Power Platform Fundamentals, *Certifying Authority*: *Microsoft*
- Introduction to Data Science in Python, *Certifying Authority*: *University of Michigan*
- Applied Plotting, Charting & Data Representation in Python, *Certifying Authority*: *University of Michigan*
- Machine Learning, *Certifying Authority*: *Stanford University*

Awards:
- Data Structures and Algorithms - *Expert Level, Coding Practices in Elab, Srm/Elab*
- C++ Expert Level, *Coding Practices in Elab, Srm/Elab*
- Best Project Techknow-2018, *Department of Physics/SRMIST*

Volunteer Experience:
- Dedicated Member of Event Resource and Management team at SRM MUN Conference.