Akshil Anilkumar Mundakatil

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Research-oriented engineering graduate with a Bachelor's in Computer Science and Engineering and currently pursuing a Master's in Engineering at San Jose State University. Adept in backend development and skilled in database management with two years of professional experience at Tata Consultancy Services. Proficient in multiple programming languages, including Python, Java, C++, and others, with comprehensive knowledge in data structures and algorithms. Completed coursework encompassing diverse areas such as Artificial Intelligence, Machine Learning, Cybersecurity, and Web Programming.

Work Experience

Tata Consultancy Services, System Engineer   06-2021 – 07-2023 | India
- Spearheaded a project Cloud Counsel, a framework for infrastructure assessments and recommendations crucial for cloud migration.
- Functioned as a backend developer and database manager, utilizing Java to create a robust platform. Managed a database with over 80,000 records, ensuring seamless data accessibility and reliability. Successfully automated the platform features, leading to an 85% reduction in downtime.
- Tailored the platform to meet specific client component requirements through effective communication.
- Fortified platform security through the implementation of a robust suite of measures, including advanced authentication methods, URL masking, and encryption for passwords and usernames, among other security protocols, resulting in a 30% reduction in cybersecurity incidents and safeguarding against potential threats and vulnerabilities.
- Proficient in Azure services like DevOps and migration, seamlessly integrated these features based on individual client needs, establishing a solid grounding as a versatile cloud consultant.

GACL, IT Intern   06-2019 – 07-2019 | India
- Worked on the Legacy ERP software system, consolidating all the business processes of the organization.
- Created an organized employee detail module, which required the use of DB, Java, and JavaScript.

Education

Master's in Engineering, San Jose State University   08-2023 | USA

Bachelor's in Computer Science and Engineering,   07-2017 – 06-2021 | India, GPA: 3.6
SRM Institute Of Science & Technology (Deemed University)

Projects

Detection and determining the severity of red lesion diabetic retinopathy,   08-2020 – 06-2021
SRM Institute Of Science & Technology
- Developed a Machine Learning project for early detection and severity assessment of Diabetic Retinopathy (DR), a condition causing retinal blood vessel damage due to low insulin.
- Implemented image classification using Support Vector Machine (SVM) and Deep Convolutional Neural Network (DCNN) algorithms.
- Achieved a 97% F1 score for disease detection and a 78% F1 score for severity classification, using DCNN.

Analysis of NBA using data science, University of Michigan (online non credit course)   09-2019 – 10-2019
- Analyzed NBA player statistics, emphasizing the correlation between three-point scoring and overall player performance.
- Utilized Python, Data Science techniques, and advanced plotting methods to accurately compile and visualize player averages via bar and line graphs.
- Concluded that elite players excel in both three-point accuracy and overall scoring based on the analysis.

Legacy ERP Software System, GACL   05-2019 – 06-2019
- Worked on the creation of the employee detail module for the Legacy ERP software system using Java, DB and Javascript

Cybersecurity using AI and ML for Edge Computing, San Jose State University   08-2023 – present
- Researched adaptive systems that can autonomously detect, prevent, and respond to threats within edge devices and networks by leveraging AI algorithms to analyze patterns, behaviors, and anomalies. Used Machine learning algorithms like Random forest and CNN to tackle threat vectors.

Projects in Artificial Intelligence and Data Engineering, San Jose State University   08-2023 – present
- Informative Search using A*, BFS, and DFS: Implemented different algorithms for maze search for optimal pathfinding
- Sequential Decision-Making by Value/Policy Iteration: Utilized decision-making AI algorithms like value and policy iterations for optimal solutions
- Sequential Decision-Making in Continuous Space with Quadratic Reward - LQR: Implemented pendulum control using LQR to achieve stability.

Relevant Coursework

- Python programming
- Java
- Database Management Systems
- Object oriented analysis and design
- Artificial Intelligence and data engineering
- Natural language processing
- Operating systems
- Object-oriented programming using C++
- Cybersecurity with Artificial intelligence
- Data Structures
- Web programming
- Program design and development
- Machine learning
- Engineering analysis
- Distributed computing

Awards

Author of the Best Paper, International Conference on Innovative Applications of Emerging Technologies and Management

C++ Expert Level, Coding Practices in Elab, Srm/Elab

Certifications

Introduction to Data Science with Python, Certifying Authority: University of Michigan

Applied Plotting, Charting & Data Representation in Python, Certifying Authority: University of Michigan

Machine Learning, Certifying Authority: Stanford University

AZ- 900, Certifying Authority: Microsoft