Suryaveer Singh

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EDUCATION

University at Buffalo, The State University of New York   Buffalo, NY
Masters of Science in Engineering Science Focus in Robotics GPA: 3.8/4.0   *Aug. 2022 – Dec 2023*

SRM Institute of Science and Technology   TN, India
Bachelor of Technology in Computer Science and Engineering   *Aug. 2012 – May 2016*

EXPERIENCE

Software Engineer   July 2016 – June 2022
Unisys   *Bengaluru, India*

- Engineered a secure Remote Working Kit on Azure Cloud Services, leveraging Node.js, HTML5, and JWT for robust authentication and streamlined software distribution, enhancing remote work safety
- Led a team in delivering an Identity and Access Management (IAM) front-end with microservices architecture, ensuring high availability and load balancing. Employed Java, Node, Postgres, and Nginx for seamless integration
- Developed an on-premises passenger facilitation solution for airports with iris detection, using Angular 4, Spring Boot, and Tascent iris scanner API
- Engineered 2 migration utilities for 300 million records, ensuring high reliability with Spring Boot, Oracle, and ActiveMQ. Achieved over 1 million daily migrations with a minimal failure rate
- Designed and Implemented 5s SLA Retrieve identity workflow for IAM solution using Java, Spring, Hibernate, SQL, and REST API

Software Engineer Intern   Jan. 2016 – June 2016
Unisys   *Bengaluru, India*

- Created an android app to read facial characteristics using Java, Spring, Hibernate Android Development, Angular, and Oracle DB
- Created web-pages for on-prem solution for displaying demographic and biometric details of enrolled people using Angular, Java, Spring, hibernate and Oracle DB

PROJECTS

Audio Classification of Environmental Sounds | *Python, Pytorch, Deep Learning*   Jan. 2023 – May 2023

- Conducted extensive research to enhance classification accuracy through innovative preprocessing strategies on audio data for audio classification tasks, leveraging transfer learning techniques with CNN's achieving 97.6% accuracy
- Evaluated Mel-spectrograms and MFCC audio processing methods and completed comparative study. Extensively tested on environmental sounds datasets(ESC-50, UrbanSounds8K)

Contactless Fingerprint Verification | *Python, Flask, MongoDB, OpenCV, React, Expo*   May 2018 – May 2020

- Developed and deployed a cross-platform mobile application for contactless fingerprint enrollment and verification. Utilized Expo, Axios and React Native for frontend, and Python with Flask and OpenCV for backend
- Implemented capture for enrollment and verification for fingerprints with high accuracy($>95\%$)
- Utilized an object detection model (Vision Transformer) to accomplish fingerprint matching by generating ridges of fingerprints with minimal failure rate($<5\%$)

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL (Postgres), JavaScript/TypeScript, HTML/CSS
Frameworks: Spring, Hibernate, React, Express.js, Flask, JUnit
Developer Tools: Git, Docker, Azure, VS Code, IntelliJ, Eclipse
Libraries: PyTorch, TensorFlow, Axios, Spring Boot, OpenCV, pandas, NumPy, Matplotlib, rospy