

PRITHVI SHIRKE

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EDUCATION

Master of Computer Science (Big Data Systems)

Expected May 2025

Arizona State University, Tempe, Arizona

CGPA: 3.94/4

Relevant Courses: Advanced computer graphics, Digital video processing, Statistical machine learning, Data mining.

Bachelor of Technology in Electronics Engineering

May 2022

Veermata Jijabai Technological Institute, Mumbai, India

CGPA: 3.20/4

Relevant Courses: Data Science, Neural Network and Fuzzy Systems, Database Management Systems.

TECHNICAL SKILLS

Programming languages: Python, C++, Java, Kotlin, Typescript, SQL, and JavaScript.

Tools & Framework: TensorFlow, PyTorch, Keras, OpenCV, CUDA, TensorRT, ONNX, Docker, Git, AWS, Unreal Engine, Matlab, MongoDB, MySQL, Node.js, Flask, React.

Areas of Expertise: Deep Learning, Computer Vision, Artificial Intelligence and Communication Skills.

PROFESSIONAL EXPERIENCE

Graduate Services Assistant – Grader (Data Mining) | Arizona State University

Jan 2024 – Present

- Overseeing test-taking environments, managing test materials, grading assignments, monitoring online platforms.
- Exploring data mining concepts, resolving student doubts, and delivering foundational tutorials.

Software Engineering Associate | Telstra Global Business Services LLP | Pune, India

Jul 2022 – Jul 2023

- Engineered a new service in the Telstra application, utilizing JavaScript, TypeScript, Kotlin, React, and MySQL.
- Directed tasks and projects using Jira in an Agile methodology environment.
- Developed comprehensive Junit test cases, integrating with GitLab's CI/CD pipeline for testing and deployment.
- Gained experience with Bamboo, Bitbucket, Splunk, and Salesforce technologies.

AI and ML Developer Intern | Airpix Geoanalytics | Mumbai, India | [demo](#)

Feb 2021 – Jul 2021

- Implemented real-time video analytics of vehicles using computer vision and deep learning.
- Utilized the SSD frameworks and Deepsort models for vehicle detection, classification and tracking.
- Created multiprocessing and a multithreaded system using python libraries.
- Implemented an asynchronous programming technique (async io) to write concurrent python codes.
- Optimized the code on Jetson Xavier Board using TensorRT for NVIDIA GPU inference.
- Collaborated with Number Plate Recognition team and deployed the solution on Toll Plazas which reduced the waiting time of the vehicles by 42%.

PUBLICATION

DaRL Member - Data Mining and Reinforcement Learning Group | Arizona State University

Sep 2023 - Present

- **Accepted Paper:** "SynTraC: A Synthetic Dataset for Traffic Signal Control from Traffic Monitoring Cameras" at the 27th IEEE International Conference on Intelligent Transportation Systems (ITSC 2024). [[paper](#), [code](#)]

PROJECT

Bank Security System | [demo](#)

- Mastered LSTM for 91% accurate action recognition, integrating pose-estimator to spot unusual behaviors.
- Developed custom YOLOv5 object detection system, attaining 96.40% precision, and seamlessly integrated with bank CCTV for threat detection.
- Optimized bank security with innovative solutions, enhancing surveillance and ensuring customer safety.

Binary Loop Subdivision on Mesh Surfaces [project](#)

- Implemented binary Loop subdivision surfaces using Python half-edge data structure.
- Used MeshLab and G3DOGL for visualizing mesh results on 3D models like Utah's teapot and Stanford's bunny.

AI-Based Crop Recommendation App For Farmers | [project](#)

- Curated a comprehensive dataset for 30 crops, performed data cleaning, and feature extraction for training a machine learning model (ANN) in Python.
- Leveraged NodeJS to develop a bilingual (English and Hindi), user-friendly application.
- Deployed a Python Flask server on Oracle Cloud for real-time crop prediction.
- Recognized top 10 in Gov-TechThon 2020, an IEEE-organized virtual hackathon, for achieving 99.30% accuracy.

EXTRACURRICULAR ACTIVITIES

- Project Mentor at the Institute of Electrical and Electronics Engineers (IEEE) – VJTI, Mumbai, India. **2021**
- Department Head and Event Manager for college's sports committee "Enthusia" – Mumbai, India. **2018 – 2020**
- National Level Karate Player (School Games Federation of India – SGFI). **2015 – 2018**