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CHIRAV DAVE
Mountain View, CA

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EDUCATION

MS, CS, Arizona State University | GPA 3.92 *August 2017 - December 2019*

BTech, CS, Maulana Abul Kalam Azad University of Technology | GPA 8.67/10 *July 2012 - July 2016*

TECHNICAL SKILLS & COURSEWORK

Languages:	Python, C++, C, Java, SQL, Html5, JavaScript, PDDL
Databases:	MySQL, PostgreSQL, SQLite
ML Technologies:	Pytorch, TensorFlow, Numpy, OpenCV, Pandas, Scikit-learn, Matplotlib
Coursework:	Foundations of Algorithm, Artificial Intelligence, Perception in Robotics, Intelligent & Assistive Robotics, Statistical Machine Learning

WORK EXPERIENCE

Technical Lead, Full-Stack Backend Developer | A10 Networks | Pune *June 2023*

- Leading a high-performing team of four members in the execution of various technical projects.
- Playing a key role in system design, translating product owner requirements into robust & scalable technical solutions.
- Spearheading the development and execution of Proof of Concepts (POCs) to validate & demonstrate the feasibility of cutting-edge technologies.
- Collaborating closely with cross-functional teams, including frontend developers, product managers, and QA engineers, to ensure seamless integration & delivery of high-quality software solutions.

Technology Stack: Flask, MySQL, DynamoDB

Research Engineer, Lead | DiDi Labs | California *Nov 2021 - April 2023*

- Architected & Implemented a Graph-Based Neural Network to forecast the heading direction of pedestrians within a scene to aid our car's decision-making process.
- Boosted the model's efficiency from 65% to 72%.
- Optimize and deploy models using techniques such as model compression, pruning, and quantization to improve performance and reduce computational cost.
- Constructed different metrics to measure the accuracy of our algorithms.

Technology Stack: C++, Python, PyTorch

Backend Software Developer | AmazonGO | Washington *Feb 2020 - Sept 2021*

- Designed Java APIs based on SQS to receive requests from clients and utilize vision-based algorithms for predicting the ultimate shopping events.
- Collaborate with data scientists and software engineers to take machine learning models from research and development to production.

Technology Stack: Python, Java, Numpy, Scikit-learn, OpenCV, SQS, Guice

Graduate Researcher | Arizona State University | Arizona *Jan 2018 - October 2019*

- Developed a visual programming interface with dynamically populated puzzle shaped blocks encoding the robot's possible actions to allow users to perform navigation and manipulation by simply connecting them in some logical order and integrated a feedback mechanism to explain failures based on the user's capability of understanding (Thesis).
- Designed and developed programming assignments on AI search problems in ROS and the Ping Pong game for Game Trees in RVIZ.

Technology Stack: Python, OpenRAVE, PDDL, ROS, Gazebo, RVIZ, Java, Html5, JQuery, AJAX

AI Engineer Intern | Invitae | Massachusetts *May 2019 - August 2019*

- Developed and deployed an ML-based PHI scrubbing model using an API, reducing the risk of unauthorized access to sensitive healthcare data by removing PHI elements while retaining data utility for analysis and research.
- Designed and build an end-to-end object detection pipeline for scanned images using OpenCV, OCR and ML models.
- Performed various data augmentation methods for generating a large custom dataset.

Technology Stack: Python, Numpy, Pandas, NLTK, Spacy, OpenCV, Sklearn, Flask, JS

PERSONAL PROJECTS | GITHUB

- Implemented Policy Gradient & Double DQN to play the famous Atari game Pong (Tensorflow, OpenAI Gym, Numpy, OpenCV).
- Designed and developed a high-performance algorithm for matrix multiplication and transpose using threads and without using any linear algebra library (C++).