ROHIT BERNARD

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A Software Engineer with a passion for solving complex puzzles and real world problems using programming and logic. Helping develop safer and more efficient software solutions for tomorrow.

EXPERIENCE

Founding Engineer — San Francisco, CA
EzDubs — Oct 2023-Present

- Work with the team to develop translation and dubbing software using AI.
- Develop and build EzDubs cross-platform mobile application, a multilingual consumer messaging and calling application.

Intern – Safety and Verification of Intelligent Systems — Princeton, NJ
Siemens — June 2023-Sept 2023

- Design and build a perception system to track objects in a warehouse setting using a single monocular camera.
- Communicate with other localization systems using ROS to identify inconsistencies in position estimates and detect failures.

Graduate Student Researcher — Los Angeles, CA
CPS-VIDA Group, University of Southern California — June 2022-June 2023
Advisor: *Jyotirmoy V. Deshmukh*

- Train and integrate a deep neural network to perform monocular 3D object detection for a perception system.
- Create a RL testing platform by integrating autonomous driving software with the Carla simulator.

SDE Intern - Mobile — Bengaluru, India
Practo — March 2021–July 2021

- Implemented new user flows, built new features, made app improvements, and fixed bugs on their iOS applications
- Learned how to create and maintain iOS applications in Swift and gained valuable experience collaborating with a team.

EDUCATION

University of Southern California — Los Angeles, CA
Master of Science, Computer Science — August 2021–May 2023
Relevant Coursework: Advanced Computer Vision, Analysis of Algorithms, Autonomous Cyber-Physical Systems, Deep Learning, Foundations of Artificial Intelligence, Applied Natural Language Processing, Holodecks **GPA: 3.78**

Dayananda Sagar College of Engineering — Los Angeles, CA
Bachelor of Engineering, Computer Science — August 2017–June 2021
Relevant Coursework: Data Structures, Object Oriented Programming, Machine Learning, Artificial Intelligence and Agent Technology, Internet of Things, Computer Networks **GPA: 9.45/10**

SKILLS

- Programming Languages: Fluent in C, Java, Python, MySQL, Conversational in JavaScript, C++, Swift, Basic in Dart, Objective-C
- Technical Skills: Git, Android, iOS, OpenCV, Keras, Tensorflow, PyTorch, OpenAI Gym, Stable-Baselines, Node.JS, Express, Arduino, Carla, Working knowledge of: Flask, Flutter, ROS, MATLAB, Simulink, Jira, Docker, Transformers
- Soft Skills: Quick Learner, Adaptable, Team Player, Problem-Solving Attitude
- Interests: Autonomous Vehicles, Artificial Intelligence, Robotics, Reinforcement Learning, Computer Vision, Aviation, Algorithms

ACADEMIC PROJECTS

Gesture Controlled Swarm — 2nd year MS, 2022

- An individual project utilizing miniature drones to render a simple 3D point cloud which can be controlled and manipulated by a user's hand gestures. Rendered object follows movements of user's arm. Can be activated and deactivated using a gesture.
- Built upon USC ACT lab's Crazyswarm consisting of a Python API to track and command a swarm of Crazyflie 2.0 drones.

Posture Coach — Senior year UG, 2020 - 2021

- Developed a cross platform mobile application using Flutter, to track and correct a user's exercise posture in real time.
- Determined the correctness of a user's posture during exercise using timed automata over a set of body key-points obtained by fine-tuning a Pose Estimation model called PoseNet.

Bluetooth Controlled Quadcopter — Junior year UG, 2019

- Programmed and assembled a quadcopter to be controlled remotely via Bluetooth, from a smartphone.
- An Arduino Microcontroller runs flight control systems, communication, and signal timing.