

# Omar Hossain

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## Objective

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I am a prospective graduate in Computer Science and Engineering, eager to contribute my skills to a software engineering project. I am seeking opportunities that will enable me to enhance my technical abilities while collaborating with a diverse team of professionals in a professional work environment.

## Education

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- **University of California at Irvine**
  - Computer Science and Engineering Major
  - UC GPA of 3.84, Graduation in June 2023
  - Relevant courses: Data Structures, Research in Robot Motion, Artificial Intelligence, Machine Learning, Computer Architecture (MIPS)

## Work Experience

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- **Amazon SDE Intern (2022 Summer)**
  - Worked on Amazon Photos Engagement Team
  - Design and wrote Back-End Code that was deployed into Production
  - Utilized AWS Tools/Services including DynamoDB, Gluejob, Athena, CDK, etc. to analyze customer data and provide significant information to the user to maximize delight
- **Chief Engineer at UAV Forge (Drone Team) (2021-2023)**
  - Manage the Electrical and Software Engineering teams, including structuring, hiring, job assignment, team road map, and other managerial roles
  - Research and Develop Path Planning and Coverage Planning algorithms
  - Implement them with Autonomous Flying Vehicles and Autonomous Driving Vehicles
  - Interface between Robots and ground station with ROS (Robot Operating System) and Linux
- **Researcher at Professors Kia's Robotics Lab (UCI Robotics Research) (2022-Present)**
  - Perform research and experiment on local and global motion planning algorithms
  - Model control systems (LQR, MPC) in regards to various kinematic / dynamic systems
  - Utilize Python, Matplotlib, Numpy, and Drake to simulate and implement control systems
- **Avionics Engineer at UCI Rocket Project (2022-2023)**
  - Worked on Embedded Software for Microcontrollers (Teensy)
  - Implement Radio Frequency Communications between rocket and ground station
- **Game Developer at Hexcaliber Games (Game Development Studio) (2016-2022)**
  - Created indie video games leading a wide range of talents including programmers and artists
  - Managed clear team roadmap throughout game development cycles
  - Self-published 5 projects via Game Jams. Placed 4 out of 128 entries, received over 1000 views

## Skills, Abilities and Honors

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- C#, Python, C++, Java, Git, Visual Studio, Unity, AWS, Typescript, ROS, Linux
  - Experienced in Python Libraries Numpy, Matplotlib, Jupyter Notebook, and Scipy, used in Machine Learning and Vision
  - Proficient at quickly adapting to new languages and toolchains
- **Fluent in English and Proficient in Spanish**