

Shubham Kumar

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OBJECTIVE

With a 4.0 GPA in UCSD's ECE major, I have demonstrated my diligence and reliability both in my studies and at my previous research and internship positions. As a motivated individual, I can apply my skills to [position]

EDUCATION

University of California, San Diego

Class of 2023 | B.S. Electrical Engineering

GPA: 4.15 (Weighted) | 4.0 (Unweighted)

UCSD Jacobs Engineering Scholar | Full-Ride Scholarship

San Diego, CA

2019 - present

SCHOLARSHIPS & AWARDS

- Jacobs Engineering Scholar at UCSD, a Full-Ride Scholarship
- University of California Regents Scholar
- National Merit Scholar
- Bronze President's Volunteer Service Award

RELEVANT EXPERIENCE

Research Assistant – Prof. Truong Nguyen | UC San Diego

April 2020—Present

Fall Risk Assessment of the Elderly Based on Video and other Physiological Features

- Implemented computer vision algorithms, cv2 functions, and correlation trackers to block faces and protect privacy of subjects in 150+ videos collected for analysis
- Applied machine learning regression and classification Techniques such as SVM, SVR, logistic regression, Naive Bayes classification to assess relationship between cognitive and physical health

Research Assistant – Prof. Truong Nguyen & Dr. Sarah Graham | UC San Diego

June 2020—Present

Depth Estimation Analysis for a Novel Camera System

- Applied published spatio-temporal depth estimation algorithms to quantify performance of a novel camera system against conventional camera systems – extensively worked with Linux systems and Python script

Website and Technology Director – DebateDrills

June 2020 - Present

- Manage all technical platforms for 1MM+ Valuation Education Technology Company, including website, learning management system (LMS), and future platforms
- Deliver functionalities using HTML, CSS, Bootstrap, JavaScript, and Django

Systems Engineering Intern – Cubic Corporation

San Diego, CA

Cubic Mission Solutions

Summer 2019

- Designed MATLAB probability simulation to determine and optimize the time to detection of airborne radio nodes under various parameters such as number of beams and nodes, beam size, beam velocity, etc.

Research Intern – United States Air Force Research Laboratory

Rome, NY

CPO 3 University Project

Summer 2018

- Created a sensor fusion algorithm using Python and MATLAB on a drone wireless beamforming project to identify which sensors yield the most accurate readings

TECHNICAL SKILL SET

- Machine Learning Skills:

Stanford Machine Learning Course, Coursera Deep Learning Specialization (Coursera), Computer Vision, Semantic Segmentation, Object Detection

- Programming Languages:

Python (TensorFlow, PyTorch, Django), MATLAB, C, Java, HTML, CSS (Bootstrap)

- Software Skills:

Linux, Eagle CAD, SolidWorks, Visio, Google Colab, Jupyter Notebook, Excel, Web Development

- Hardware Skills:

Wiring, Soldering, 3D Printing, Laser Cutting

RELEVANT COURSEWORK

- Major Classes:

ECE 5 (Introduction to Electrical & Computer Engineering), ECE 15 (Engineering Computation), ECE 25 (Introduction to Digital Design), ECE 35 (Introduction to Analog Design), ECE 45 (Circuits & Systems)

- GE Classes:

MATH 20C (Calculus & Analytic Geometry), MATH 20D (Introduction to Differential Equations), MATH 20E (Vector Calculus), MATH 18 (Linear Algebra), PHYS 2B (Electricity & Magnetism), PHYS 2C (Fluids, Waves, Thermodynamics, & Optics)

REFERENCES

- Professor Truong Nguyen: tqn001@ucsd.edu