TANISH JAIN

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EDUCATION

Stanford University
Master of Science in Computer Science – September 2020 – June 2022
Artificial Intelligence Track **GPA: 3.85**

University of California, San Diego
Bachelor of Science in Electrical Engineering – Graduated March 2020
Machine Learning & Controls Depth **GPA: 3.93**

WORK EXPERIENCE

Researcher

Changing Cities Research Lab — Mar 2021 – Present
- Develop a computer vision learning model to evaluate physical conditions of urban neighborhoods from Google Street View imagery.
- Test reliability of the model to study impact of urban environments on well-being.

Stanford Vision & Learning Lab — Jan 2021 – Present
- Augment the 3D objects dataset for the iGibson robot learning platform.

Teaching Assistant — Jan 2021 – Present
Stanford University
- Teaching assistant for CS 103: Mathematical Foundations of Computing, BIOE 301P: Research Data and Computation (Spring 2021), and STS 1: The Public Life of Science and Technology Course (Winter 2021).

Undergraduate Researcher

UC San Diego – Dr. Tara Javidi's Intelligent Drones Lab — June 2020 – Dec 2020
- Coded drone-based Simultaneous Localization & Mapping (SLAM) algorithms, **improving localization accuracy by over 52%** in under 10 weeks.

UC San Diego – Dr. Jack Silberman's Smart Wheelchair Lab — June 2019 – Mar 2020
- Developed low-level controls for an affordable autonomous wheelchair.
- Enhanced wheelchair safety by **reducing response lag from 0.6sec to under 0.02sec** through more efficient and robust code.

UC San Diego – Dr. Shaya Fainman's Photonics Lab — Mar 2019 – June 2019
- Studied epidemic dynamics by using opto-electronically coupled LED arrays as an analogy and ran simulations based on laser rate equations.

Electrical Engineering Intern — June 2018 – Aug 2018
AECOM
- Optimized power network designs for large-scale infrastructure projects, **reducing power use by 16%** over baseline projections.
- Underwent rigorous training in power systems optimization, as well as examination and quality assurance of network layouts.

PROJECT EXPERIENCE

Automated Warning System for Aircraft Approaches — Aug 2020 – Present
- Develop a RNN-based machine learning model that provides real-time predictive warnings for unstable approaches in aircrafts in general aviation.

ML-based Mapping of Neolithic Water Management Features — Sep 2020 – Feb 2021
- Develop a **Fully Convolutional Network (FCN)** to identify archaeologically significant rock pools in multi-temporal satellite imagery.

Gait Correcting Insole for Parkinson's Disease Patients — Feb 2019 – Present
- Developed an **insole for Parkinson's Disease Patients** which improves gait.
- Designed a machine learning algorithm to customize corrective feedback for user.
- Won the **Popularity Prize** at the UCSD ECE Design Competition '19, as the **most voted team by patients, doctors and students.**

Micromouse Annual Project – Maze-solving Robot — Sep 2018 – June 2019
- Worked in a team of 5 to design a **self-directing maze-solving robot.**
- Created searching algorithms to program the autonomous robot and ensure effective software - hardware integration.

Grand PrIEEE Annual Project – Autonomous Vehicle — Sep 2017 – May 2019
- Programmed microcontrollers and designed PCBs to build an **autonomous, line-following miniature vehicle.**
- Awarded the **First Place** at the Grand PrIEEE Annual Robotics Competition with the **fastest autonomous vehicle.**

LEADERSHIP

Project Director
Project in a Box (PIB)
Engineering Student Organization
June 2019 – June 2020
- Led **80+ students & managed a $40,000 budget** in the organization's technical development arm.
- Organized engineering skills development workshops in underserved communities.

Team Lead & Mentor
IEEE UC San Diego
Sep 2017 – June 2019
- Led a team of 5 to design an autonomous vehicle, and received the **Outstanding Team Lead** award for exceptional team management.
- Mentored amateur teams subsequently to build similar autonomous vehicles.

RELEVANT COURSEWORK

- Deep Learning
- Intelligent Systems: Robotics & Machine Intelligence
- Engineering Probability & Statistics
- Linear Systems Fundamentals
- Linear and Nonlinear Optimization with Applications
- Machine Learning

AWARDS & ACHIEVEMENTS

- ECE Department Service Award
  April 2020
- USAIRE Student Award
  November 2019
- Member, Eta Kappa Nu (HKN) – IEEE Honor Society
  January 2019 – Present
- Outstanding Team Lead, IEEE Annual Project
  June 2018

SKILLS

TECHNICAL SKILLS

Python	MATLAB
Tensorflow	LabVIEW
C	Pytorch

SOFT SKILLS
Public Speaking and Presentation
Project Management
Teamwork