Ganesh Pimpale

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Education

University of California, Berkeley **Expected Graduation: May 2025**

- Bachelor of Science - BS, Mechanical Engineering

Santa Teresa High School **August 2017 - May 2021**

- GPA: 4.46(Weighted) / 3.85 (Unweighted)

Work Experience

Research Intern **August 2020 - Present**

Stanford University Department of Computer Science *Palo Alto, California*

- Developed the following project under the guidance of Prof. Jeanette Bohg and Dr. Michelle Lee in association with the Stanford Interactive Perception and Robot Learning Lab
- **Robotic Automated Assembly**
  - Designed software to algorithmically explode a 3D assembly in a CAD environment for dataset data in C++ and Python using the Bullet physics simulation environment
  - Created user interface and backend to collect explosion data from human data labelers
  - Currently in the process of collecting data using both simulations and humans

Co-Founder **August 2019 - Present**

Innexgo LLC. *San Jose, California*

- Co-founded a startup creating attendance and testing technology to aid low-income and Title 1 schools
- Designed user hardware and internal electronics; oversaw the manufacturing and installation of our system
- Funded over $10000 by the East Side Union High School District to deploy our solutions in pilot programs

Software and Business Intern **March 2020 - March 2021**

Engaging Education Inc. *Remote*

- Interned at an early-stage startup teaching "life skills" public schools cannot provide for their students
- Aggregated data from social media platforms; analyzed them using Python to understand our target user and determine marketing strategies
- Tested the functionality and security of the app and web app built with Flutter and MongoDB

Research Intern **June 2019 - August 2021**

Stanford University Department of Electrical Engineering *Palo Alto, California*

- Developed the following projects under the guidance of Prof. Tsachy Weissman in the Stanford Compression Forum
- **Facial Emotion Detection Learning Models (March 2021 - August 2021)**
  - Oversaw the design and development of a facial tracking user interface for dataset data collection
  - Created using Javascript and React JS; designed for implementation into web apps by other developers
- **Vision-Based Robotic Object Manipulation (March 2020 - December 2020)**
  - Used a human-mimicking hand and a primitive shape detection algorithm to determine grasping locations on a given object using only computer vision
  - Designed a robotic hand and arm and created simulation environments with Python and C++
- **Human-Based Image Compression (June 2019 - March 2020)**
  - Prototyped a segmentation based image lossy compression algorithm in Python to mimic the way images are understood by humans
  - Researched the algorithm's feasibility and effectiveness compared to other compression methods
- *All projects above were published in the Informaticists online journal*
- **STEM to SHTEM Student Mentor and Organizer (June 2020 - August 2021)**
  - Organized an 8-week summer program for high schoolers to learn about research and technology
  - Taught high schoolers programming and design through multiple development seminars
  - Hosted an online speaker series consisting of professors, researchers, and their recent work

Projects

Infill Pattern and Density Optimization for 3D-Printing **October 2019 - May 2020**

- Designed software that optimizes the strength to mass ratio of 3D-printed parts with Python and C++
- *Received the Grand Prize Alternate and First Award in the 2020 Synopsys Championship Science Fair*

Improving Hangul to English Translation for OCR **March 2019 - August 2019**

- Prototyped a method to preprocess Hangul text to identify characters that are English syllables or true Korean vocabulary during Optical Character Recognition translation with Python
- *Research presented at the TeX User Group 2019 Conference*

"Marine Autonomous Litter Collector" (MALC) **September 2018 - May 2019**

- Created a full scale low-cost autonomous water drone capable of picking up surface trash
- *Received the Regional Stockholm Junior Water Prize and the Grube Award for the most ingenious project*

"BreeziHome" **December 2017 - June 2018**

- Prototyped a smart home system in order to reduce the use of air conditioning using C++ and Java
- *Received 2nd place in the National Engineering and Design Competition California State Championships*