Ganesh Pimpale

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Education

University of California, Berkeley *August 2021 - May 2025 (Anticipated)*

– B.S. Major: Mechanical Engineering, Minor: Theater and Performative Studies; **GPA:** N/A

– Extracurriculars: The Daily Californian, Indian Student Association, IEEE, Open Computing Facility

Santa Teresa High School *August 2017 - May 2021*

– **GPA:** 4.46(Weighted) / 3.85 (Unweighted)

Skills

– **Programming Languages:** Python, Java, C++, C, C#, Javascript, LaTeX

– **Operating Systems:** Windows 7/8/8.1/10, Windows Server 2016/2019, Linux (Ubuntu, Debian, Arch)

– **Technologies:** OpenCV, PyBullet, Core SciPy Ecosystem, Keras, MySQL, MongoDB, Flutter

– **Programming Tools:** Git, PyCharm, IntelliJ, VsCode, Visual Studio 2019, Vim, Emacs

– **Design Tools:** SolidWorks(Program/API), Onshape(Program), FreeCAD(Program/API), OpenSCAD, Ultimaker Cura

Experience

Interactive Perception and Robot Learning Lab, Stanford / NYU Remote

Research Intern *August 2020 - Present*

– Developing the following project under the guidance of Prof. Jeanette Bohg and Dr. Michelle Lee

– **Robotic Automated Assembly:** training robots to physically assemble parts into a complete, functional assembly

Innexgo San Jose, California

Hardware Engineering Lead, Co-Founder *August 2019 - Present*

– Co-founded a startup creating attendance and testing technology to aid low-income and Title 1 schools

– Designed user hardware and its internal electronics; oversaw the manufacturing and installation of our hardware in pilot schools

– Currently funded over $9000 by the East Side Union High School District to deploy our attendance system

Stanford Compression Forum Palo Alto, California

Research Intern and Student Mentor *May 2019 - September 2021*

– Developed the following projects under the guidance of Prof. Tsachy Weissman and published them in the Informaticists online journal

– **Facial Emotion Detection Learning Models:** Developed software to track facial features and predicted emotional data in order to create large datasets to train facial recognition and emotional recognition algorithms

– **Vision-Based Robotic Object Manipulation:** Used a human-mimicking hand and a primitive shape detection algorithm to determine grasping locations on a given object using only computer vision

– **Human-Based Image Compression:** Prototyped a segmentation based image lossy compression algorithm in Python to mimic the way humans understand images

Projects

Infill Pattern and Density Optimization for 3D-Printing Python, C++, FreeCAD, Ultimaker Cura

Software Engineering and Manufacturing *October 2019 - May 2020*

– Designed software that optimizes the strength to mass ratio of 3D-printed objects

– *Received the Grand Prize Alternate and First Award in the 2020 Synopsys Championship Science Fair*

Improving Hangul to English Translation for OCR Python, OpenCV, Keras

Software Engineering *March 2019 - August 2019*

– Prototyped a method to preprocess Hangul text to identify characters that are English syllables or true Korean vocabulary

– *Research presented at the TeX User Group 2019 Conference*

"Marine Autonomous Litter Collector" (MALC) Python, OpenCV, Keras, SolidWorks

Software Engineering and Mechanical Engineering *September 2019 - May 2019*

– Created a full scale low-cost autonomous water drone capable of searching for and picking up surface trash

– *Received the Regional Stockholm Junior Water Prize and the Grube Award for the most ingenious project*