

# DAVID PITT

Math/Computer Science Major

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## OVERVIEW

I am a sophomore math and computer science major at Harvey Mudd College with 3 years of experience using C++, Python and Tensorflow in professional and research settings. I'm seeking software research, quantitative analysis and software engineering internships for summer 2021.

## EXPERIENCE

### • JUNIOR R&D ASSOCIATE

Nanotronics | Jun - Aug '20

Worked on the Applied Computer Vision R&D team  
Applied tensorflow-gpu deep learning to the correction of  
thousands of proprietary silicon wafer scans  
Developed a novel Keras CNN architecture to preprocess  
images for downstream CV use

### • MACHINE LEARNING INTERN

Harvey Mudd College | Feb - May '20

Worked under the Scientific Computing Specialist  
Revised and developed a series of Jupyter notebook-based  
machine learning workshops for students in Keras and  
scikit-learn

### • NEUROSCIENCE LAB ASSISTANT

Weill Cornell Medical College | Jul '17 - Sept '18

Performed lab assistant duties like cloning and editing  
plasmid DNA  
Completed independent quantitative research connecting SV  
proton leak to Parkinson's structural proteins  
Helped write new CUDA-C based time-series neuron image  
analysis software to replace ImageJ/FIJI

### • COMPUTER SCIENCE GRADER/TUTOR

Harvey Mudd College | Aug '20 onward

I grade assignments and hold weekly office hours for HMC's  
CSS Black, an advanced introductory Python course.

## EDUCATION

### • B.Sc., MATHEMATICS AND COMPUTER SCIENCE

Harvey Mudd College | Expected May '23

Concentration in Cognitive Science

3.3 GPA

Dean's List Honoree: Spring 2020, Fall 2020

Completed coursework in object-oriented programming,  
computability, logic and abstract algebra

### • GRADUATE

Ethical Culture Fieldston School | Sept '16 - May '19

3.93 GPA

Completed coursework in linear algebra and machine learning

Founded the school's iOS development club

## ACTIVITIES AND AWARDS

5C Hackathon, Vice President and Sponsorships Team Leader

Engineers for a Sustainable World, member

NC State University Chinese speech competition, 3rd place winner

## REFERENCES

Dr. Francis Ortega | Nanotronics Imaging  
Director of Software Engineering  
fortega@nanotronics.co

Dr. Aashita Kesarwani | Harvey Mudd College  
Scientific Computing Specialist  
akesarwani@g.hmc.edu

## SKILLS

Python	OpenCV
Tensorflow	Keras
C++	Git
Java	Academic research
JavaScript	Mandarin Chinese (fluent)

## PROJECTS

### Chaos-Based Encryption Scheme

An encryption algorithm that uses a logistic map to encode  
information. Python 3.

### N-Body Orbit Simulator

A library for simulating and animating n-body orbits using  
numerical approximation. Python 3/Matplotlib-animate.

