

Matt Wang

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OBJECTIVE: Seeking a technical internship to gain experience and expand my skillset.

EDUCATION

Princeton University

Bachelor of Science in Engineering
Concentration in Electrical Engineering (ELE)

*Princeton, NJ
Expected May 2019*

Relevant Coursework

Completed Courses

ELE 206/COS 306 – Contemporary Logic Design
ELE 201 – Information Signals
COS 126 – General Computer Science

Current Courses

ELE 208B – Electronic and Photonic Devices
ELE 301 – Designing Real Systems
COS 226 – Algorithms and Data Structures
MAE 305/MAT 391 – Mathematics in Engineering I

SKILLS

Software Applications/Languages: Proficient in Java, Verilog HDL, MATLAB.

Familiar with 3D Mechanical CAD (Autodesk Inventor), Python, HTML, CSS, Javascript/jQuery.

Hardware: Familiar with oscilloscopes, function generators, soldering, digital logic circuits.

Biological Research Techniques: Cell plating, PCR, gel electrophoresis, soil treatment, statistical analyses.

Languages: English, Mandarin Chinese, and Spanish.

WORK EXPERIENCE AND PROJECTS

M2Robots (Startup), Intern

(Summer 2016)

- Used Autodesk Recap 360 to create 3D models, experimented with photo to 3D model efficiency.
- Used MATLAB to analyze model data from .obj files created by Recap 360 for mathematical calculations.
- Created GUI for user to input coordinates of model boundaries, able to create a new .obj file with the user-defined bounds.

Arduino-Based Bots – Built on Arduino

(Summer 2016)

- Built two remote-controlled robots with driving, distance-sensing, GPS-location-detecting functionalities.
- Programmed autonomous and manual control on one robot, and active transition between the modes on the other.

Shazam – ELE 201, Built in MATLAB

(Spring 2016)

- Extracted peak pair data from an inputted sound clip using spectrogram analysis, somewhat uniquely identifying the clip.
- Implemented functionality of Shazam by comparing peak pairs to those of a known library of songs to match to a song.

Atomic Nature of Matter in Brownian Motion – COS 126, Built with Java

(Spring 2016)

- Analyzed video frames of beads undergoing Brownian motion, to derive the Boltzmann constant and Avogadro's number.
- Processed images with thresholding, identified beads with depth-first search, and analyze data with relevant physics.

Princeton University Computer (PUNc) – ELE 206/COS 306, Built with Verilog HDL

(Fall 2015)

- Designed and built 16-bit processor programmed in behavioral Verilog, synthesize on an FPGA.
- Programmed functionalities of LC-3 instruction set into controller/datapath implementation of fetch-decode-execute cycle.

MISCELLANEOUS WORK

The Ivy Advisor, Office Assistant and Tutor

(Summer 2015)

- Tutored two international Chinese students in Algebra 2 and English Grammar.
- Reorganized/rewrote website text for new website (current), conducted basic clerical work and tech support.

ShareWorld Learning Center, SAT Tutor

(Summer 2015)

- Tutored single student intensively across subjects in SAT exam, leading to a 250-point increase in tested score.

Young Scholars Program, Research Intern

(Summer 2014)

- Studied Anaerobic Soil Disinfestation (ASD) as lab intern in USDA-ARS lab, UC Davis.
- Produced formal research paper and presented research results to other labs and other research interns of the program.

ACTIVITIES

Princeton iGEM Team, Member

(2016-present)

- Currently studying advances in biotechnology in preparation for 2016-2017 competition season.