Matt Wang

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

EDUCATION

Princeton University
Princeton, NJ 08544
(*2015-present*)
Pursuing B.S.E. in Electrical Engineering (ELE)
GPA: 3.94/4.00

Relevant Coursework
Fall 2015:
ELE 206/COS 306 – Contemporary Logic Design
Spring 2016:
ELE 201 – Information Signals
COS 126 – General Computer Science

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 for calculations, created GUI for user-defined model boundaries.
- Currently exploring Wikitude and Vuforia SDKs for 3D tracking, to implement active location tracking on quadcopter.

Arduino-Based Bots – Built on Arduino (*Summer 2016*)

- Built two remote-controlled robots with driving, distance-sensing, GPS-location-detecting functionalities.
- Currently working on inter-robot communications using WiFi modules, implementing space-mapping functionality.

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.