**Lin Fan**

Applying to Electrical Engineering (MSE) – Fall 2020

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**Education\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Boston University College of Engineering: Boston, MA Expected May 2020

**Bachelor of Science in Electrical Engineering; Minor in Computer Engineering GPA: 3.60**

*Achievements: Dean’s List in Spring 2017, Spring 2018, Spring 2019, and Fall 2019*

**Skills\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Programming: C++, C#, JavaScript, Verilog HDL, MATLAB, Python

Electronics: Arduino, Raspberry Pi, Oscilloscope, Function Generator, Multimeter

Computer Software: Unity, Adobe XD, LTspice, HTML

**Engineering Projects\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Senior Project - Life Robot** Sept 2019 – present

* Implement voice enhancement using spectral subtraction algorithm on MATLAB and Python.
* Implement vocal track/vowel detection algorithms to identify presence of human voice.
* Amplify the result wav file to make the voice more audible.

**Engineering Design Lamp Post Flood Detector** Sept 2017 – Dec 2017

* Collaborated with a team of electrical, computer, mechanical, and biomedical engineers to design, build, and test a flood detector mounted on a lamp post.
* Assembled a flood detector that can survive outside condition, can alarm when there is flood, and can transmit data from a far distance to the computer monitoring system using Arduino.

**Digital Lock using Verilog and FPGA board** Jan 2017 – May 2017

* Designed a flowchart that display all of the required functionalities of the digital lock.
* Developed modules of Verilog codes and simulated the digital lock on the FPGA board.
* Implemented primary functions of locking and unlocking the system, changing the password, activating backdoor in case one forgets the password, and locking the system after 15 seconds of no operation to conserve energy.

**Ship Building Competition 3rd Place** Fall 2019

* Designed and built, using aluminum, a ship that can carry 4000g of weight and move at a fast speed without sinking.

**Relevant Experience\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Co-Founder of a Start-Up Company BinaryGrow** April 2019 - present

* Design and implement functionalities on Unity 3D using C# and VRTK
* Design User Interface of web page using WordPress on localhost and install website using AWS service.
* Design webpage using HTML, CSS, and JavaScript for our product - HereFounder
* Create tasks on Kanban and make Gantt chart to track progress on current projects
* Joined Summer accelerator program as associate team at BUild lab in Boston University

**Community Transit Challenge** Fall 2019 - present

* Design a new software technology that deploys iBeacon to ensure a better and safer way for blind, visually impaired, and seniors to commute in everyday life.
* Work closely with Massachusetts association for the blind and visually impaired.

**Born Foundation Climate Change Competition** Fall 2019 - present

* Propose to build a household that replicates the anatomy of trees because the shape of trees allows it to resist wind forces, thus providing structural stability to the household.
* Design to place wind turbines around the building to generate electricity through wind power.
* Plan to bring more visible lights to reduce energy usage from electrical light, mitigating climate change.

**Technology Innovation Scholars Program (TISP) Inspiration Ambassador** Sept 2018 - present

* Revise Innovation-in-a-box activities and present to fellow classmates to seek improvement.
* Present Innovation-in-a-box to secondary school classrooms.
* Share my experience and inspire the younger generation in pursuing Engineering and STEM majors.

**Undergraduate Teaching Fellow for EK381 Probability, Statistics, and Data Science for Engineers** Sept 2018 – May 2019

* Guided students with questions about the materials and homework during office hours and graded the homework.