

Jiayue Bai

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EDUCATION

Northwestern University, McCormick College of Engineering
Master of Science in Computer Engineering

Evanston, IL

Expected: December, 2021

- Game Design & Development, IoT, Human-Computer Interaction, Intro to Robotics, Intro to AI, Deep Learning

Boston University, College of Engineering
Bachelor of Science in Computer Engineering

Boston, MA

May 2020

- Dean's List from Fall 2017 – Spring 2018 and Fall 2019 – Spring 2020
- Electric Circuit, Probability and Statistics, Signals and Systems, Computer Organization, Computer Networking, Operating Systems, Client-Server Software Systems Design, Cybersecurity, Smart and Connected Systems, Cyber-Physical Systems, Machine Learning,

SKILLS

Programming Languages: Java, C/C++, Python, MATLAB, Verilog, HTML, JavaScript, CSS, ASP.NET, C#, RISC-V ISA, Swift, React Native

Operating Systems: Microsoft Windows, Mac OS X, Linux

Development Tools: Visual Studio, React Native, Expo, GitHub, Unity

Spoken Language: Mandarin Chinese, English

ENGINEERING PROJECTS

Northwestern University

Evanston, IL

SmartGlove Development

January 2021 – June 2021

- Designed and built a computer input device in the form of a glove. The glove has both mouse and keyboard functionalities and can be used to control a computer from afar via Bluetooth
- Developed a utility GUI that can change key/functional mapping of the buttons and gesture of the glove

Boston University

Boston, MA

CIRapp (Cluttered Image Rating) Development

September 2019 – May 2020

- Winner of 2019 BU Electrical Computer Engineering Shark Tank
- Designed and built a HIPPA-compliant, cross-platform mobile app that will be used as a clinical tool for patients with psychological problems, such as hoarding disorders, to automatically generate CIR scores through a deep learning algorithm
- Developed a separate app that will be used by clinicians and housing professionals for data collection to train the algorithm for better accuracy

Autonomous-Driving Crawler

September 2019 – December 2019

- Leader of the project (team of three)
- Designed and built a crawler that allows both autonomous and remote manual driving mode using ES32 microcontroller and Raspberry Pi
- The crawler is able to drive autonomously through a course consist of straight and 90-degree turns
- A node server and a web client are hosted on the Raspberry Pi where the user can drive the crawler manually and also see live streaming from the webcam mounted on the crawler

Physical Masquerade Attack Detection

September 2019 – December 2019

- Implemented an attack-proof path finding algorithm with an iRobot along with alarm generation functionality using Pixy2 camera and Arduino Uno

Instant Hot Shower

January 2018 – May 2018

- Designed, built and tested an instant hot shower that allowed the internal recirculation of cold water controlled by an Arduino board and additional electric circuits

Digital Lock Project

April 2018 – May 2018

- Designed and programmed a digital lock system with Verilog and FPGA that allowed users to lock and unlock a system with a password, and also change the password once unlocked

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PROFESSIONAL EXPERIENCE

Undergraduate Research Assistant

June 2019 – September 2019

Graphene Lab of Professor Scott Bunch

Boston University

- Fabricated graphene on silicon plates through the traditional sticky tape method
- Experimented with various feature factors such as temperature and time and reported effects on fabrication process

Research Assistant

February 2015 – March 2015

The Office of Congressman Sam Farr

Capitol Hill, Washington, D.C.

- Conducted tours of the capitol building for constituents, attended meetings on behalf of staff members, wrote meeting and research reports, and completed other secretarial duties as needed
- Managed all front desk functions including responding to emails, answering phone calls, and distributing mail

VOLUNTEER EXPERIENCES

Special Olympics, Washington D.C., September 2013 to June 2014

Tysons Corner Animal Hospital, Vienna, VA, February 2015 to March 2015