Jongjin **Jung**

17 Bertwell Rd, Lexington, MA 02420

(+1) 437-982-3854 | jjjung3571@gmail.com | jongjin-j.github.io/ | jongjin-j | jongjin-jung-445595204/

Education

University of Toronto *Toronto, Canada*

Bachelor of Applied Science in Computer Engineering *Sep 2019 - May 2024*

- Relevant Courses: Relevant Courses: Software Communication & Design, Computer Organization, Signals and Systems, Digital Systems, Programming Fundamentals, Computer Fundamental, Calculus I, II, III

Skills

Languages	C, C++, Java, Javascript, Python, HTML, CSS, ARM Assembly
Frameworks	React, Node.js
Database	MongoDB
Other technologies	Git, Pytorch

Experience

BOSTON UNIVERSITY LISP (Learning, Intelligence, and Signal Processing) *Boston, Massachusetts*

SUMMER RESEARCH INTERN *May 2021 - Aug 2021*

- Developed a neural network model that uses target propagation, which overcomes the vanishing gradient problem of back propagation using the Pytorch library
- Working on computational graphs of scalar functions and simple matrix functions

Projects

GIS Mapping Software (C++) Developed a city mapping software in C++ through using the OpenStreetMap API with two teammates using git version control. Created a navigation system using path finding algorithms(Dijkstra, A* Heuristics). Optimized Travelling Salesman Problem using 2-opt, 3-opt, and simulated annealing [Click Here for Video]

US Covid-19 Tracker (Javascript, React.js) Developed a Covid-19 Tracker of all states in the US using the Covid Act Now API. Utilized Axios to fetch JSON from the API. Used React-Router to navigate different pages. Imported Chart.js and Material-UI library to visualize Covid-19 data.

Private Blog (Javascript, Node.js, Express, MongoDB) Developed a blog app connected to user's local database using MongoDB. Utlilized Express to handle HTTP requests. Created frontend using the EJS view engine. Imported multer library to handle image uploads.

Hangman (C++) Developed a single player Hangman game implementing the MVC Model. Utilized ASCII Code to process keyboard inputs. Currently working on a multiplayer version.

Air Hockey (ARM Assembly, C) Developed a two-player air hockey game that uses VGA Display. Applied collision detection between the puck, the paddles, and the barriers. Utilized keyboard interrupts for paddle movement of both players.

Engineering Strategies and Practise Group Project I and II @ UofT Designed an early flood warning system that would alert residents about flooding in Toronto Islands (Communications Coordinator), Designed possible future prototypes of Muse 2, a brain-sensing meditation device, in order to overcome its lack of visual and auditory functions (Team Leader)

Awards

2015-2018 **Gold Award**, American and UK Mathematics Competition *Singapore*

2015-2017 **Certificate**, IGCSE (International General Certificate of Secondary Education) *Singapore*

2017-2019 **Diploma**, IB (International Baccalaureate) *Singapore*

2019 **Academic Award**, Academic Award at UWCSEA *Singapore*