Hyejin Lee

Full-Stack Developer and Researcher

An enthusiastic graduate student pursuing a Master's degree in Computer Science. Have two years of experience as a full-stack developer in the industry. My interests are in developing robust and innovative software, as shown in my key projects and research experience. **Online Portfolio: http://cim.mcgill.ca/~hyejin/**

hyejin.lee2@mail.mcgill.ca

+1 514 577 8142

cim.mcgill.ca/~hyejin/

linkedin.com/in/hyejin-lee-4785b7169

SKILLS

JavaScript | TypeScript | Python | HTML | CSS | Django | Github | C# | Java | Unity 3D | Spring MVC Framework | HTML5 | Linux | Arduino IDE | Docker | Android Studio

SOFT SKILLS

Teamwork | Adaptability | Communication skills | Time management

INTERESTS

- Full-stack Software Development
- Machine Learning
- Artificial Intelligence
- Virtual and Augmented Reality (VR/AR)

LANGUAGES

English

Full Professional Proficiency

WORK EXPERIENCE

Full-stack Software Developer Intern

Société Générale

05/2022 - Present — *Monreal, Canada*

A French multinational investment bank headquartered in Paris

Achievements/Tasks

- Developed and improved the organization's employee page using TypeScript, HTML, CSS (front-end), and Java (back-end).

Graduate Research Assistant

RAISE Lab, McGill University

05/2022 - Present — *Montreal, Canada*

Achievements/Tasks

- Organized "Roboethics Hackathon" at an international conference (ICRA 2022) with the research team. The focus was to design AI robots that perform simple daily tasks and address ethical challenges raised from the tasks. (https://competition.raiselab.ca/ethics-challenge)
- Developed the lab's website (http://www.cim.mcgill.ca/~pvg/) using JavaScript, HTML, and CSS.

Graduate Research Assistant

Shared Reality Lab, McGill University

09/2019 - 04/2022 — *Montreal, Canada*

Achievements/Tasks

- Designed and developed a voice manipulation paradigm to externalize auditory verbal hallucinations of schizophrenic patients during cognitive behavioral therapy (CBT) sessions at clinics.
- Used Django web framework (Python, JavaScript, HTML and CSS). Deployed the system with Docker.
- Conducted research on multilingual text-to-speech synthesis and voice generation based on deep neural networks.

LANGUAGES

Korean
Native or Bilingual Proficiency

Mandarin
Limited Working Proficiency

WORK EXPERIENCE

Full-time Software Engineer
IBM
01/2018 - 06/2019 — *Seoul, South Korea*

Achievements/Tasks

- Developed with Java (Eclipse) and SQL (Oracle) in an agile development to transfer client companies' old sales systems into a new, innovative system.
- Collaborated with developers across the world (e.g., IBM India and U.S.), coordinated user requirements and development plans.
- Troubleshot and debugged functional errors of the (front-end) interfaces upon clients' requests.

Student Intern
IBM
09/2017 - 12/2017 — *Seoul, South Korea*

Achievements/Tasks

- Developed user-centered websites following the full agile development.
- Presented in 'Web Programming', 'Database Programming' and 'Software Development Process' education sessions.

EDUCATION

MSc., Electrical and Computer Engineering (GPA 3.81/4.0)
McGill University
09/2019 - Present — *Montreal, Canada*

Courses

- Human Computer Interaction, Applied Machine Learning, Gestural Control of Sound Synthesis

BEng., Computer Science
Sookmyung Women's University
03/2014 - 02/2018 — *Seoul, South Korea*

Courses

- Software Engineering, Database Design and Query Language, Mobile Software, Linux System

Student Exchange Program
Nanyang Technological University
01/2016 - 05/2016 — *Singapore*

Courses

- Introduction to Artificial Intelligence, Operating Systems

PUBLICATIONS

Original Research (Full Paper)

The Sound of Hallucinations: Toward a more convincing emulation of internalized voices (Received Honourable Mention Award)

Author(s)

Hyejin Lee*, Ruixi Jiang, Max Henry, Yongjae Yoo, Jeremy R. Cooperstock

April 2022

Human Factors in Computing Systems (CHI), New Orleans, LA, United States [12.5% acceptance rate, 1st round]

Keywords: Deep learning, neural networks, sound synthesis, user studies, virtual reality (DOI of the paper: https://dl.acm.org/doi/10.1145/3491102.3501871)

ACHIEVEMENTS

McGill PGSS Travel Award (2022)
McGill University, Canada
- Travel award from the Post-Graduate Students' Society at McGill to present at an international conference.

Honourable Mention Award (2022)
ACM CHI Conference on Human Factors in Computing Systems
- A total of 106 papers were selected as honourable mentions **(4%)** among 2597 complete submissions. (DOI of the paper: https://dl.acm.org/doi/10.1145/3491102.3501871)

Certificate of Applied Data Science with Python (2019)
IBM, United States

Certificate of SQL Developer (2018)
Korea Data Agency, South Korea

Best Bachelor's Thesis Award (2017)
Korea Information Processing Society (KIPS), South Korea

Certificate on Artificial Intelligence Hacker Way Program (2016)
Seoul Business Agency (SBA), South Korea

MAIN PROJECTS

(Web) Voice Modelling Paradigm (2021)
- Implemented a web user interface that allows users to manipulate the timbre of a voice and synthesize artificial speech in that voice.
- Developed with JavaScript, Python, HTML, and CSS.

(Android App) Remote Pet Monitoring (2021)
- Implemented motion detection and room monitoring system that tracks temperature, humidity, and UV index for remote pet care.
- Developed with Bluetooth Low Energy (BLE) Sensors and Android Studio (Java) for the UI.

(IoT) Augmented Instrument (2019)
- Implemented three prototypes of a real-time force-sensing chair for transducing a musician's movements to mappable data that controls the sound of musical performance.
- Developed with Arduino IDE and SuperCollider.

(IoT) Phone Charging Booth with Embedded Art (2019)
- Implemented a phone charging booth that facilitates social interaction in casual social events by gradually disclosing an embedded art.
- Used Unity 3D (C#) for screen display and AUX ports for phone charging.

(Web) Smart Meeting Minute Management (2018)
- Implemented a meeting minute management system that organizes meeting minutes by analyzing their content with artificial intelligence (text analysis).
- Developed with HTML5, Angular JS, and Spring MVC Framework.

(Android App) Virtual Campus Tour with Augmented Reality (AR) (2017)
- Implemented an AR application that recognizes campus facilities with phone camera.
- Developed a touch screen interface that recognized touch motion for moving/animating a 3D Character on the AR screen.
- Developed with Unity 3D (C#) for the UI and graphical components, and deployed with Android Studio.