Skye Nam

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EDUCATION

University of Toronto

Toronto, ON

Bachelor of Engineering in Computer Engineering, Minor in AI and Business

Sep. 2022 - May 2026

Lester B. Pearson Scholar

University of Toronto

Full-ride Academic and Leadership Scholarship, \$400k

TECHNICAL SKILLS

Languages: Python, Java, C/C++, CSS, SQL, JavaScript, HTML/CSS, TypeScript, MATLAB, Assembly

Frameworks: React, Node.js, Django, Flask, WordPress, Material-UI

Tools: Git/GitHub, Linux CLI, Docker, Amazon Web Service (Cloud), VS Code, PyCharm, Eclipse, FPGA

Libraries: Pytorch, TensorFlow, Pandas, NumPy, Matplotlib

EXPERIENCE

Full Stack Developer Intern

Mar. 2024 – Aug. 2024

Remutate

Toronto, ON

- Built a Wallet interface with dynamic transaction updates using CSS, JavaScript, and HTML, ensuring real-time synchronization and accurate financial data management.
- Developed a robust SMS verification system utilizing **Django** for enhanced security protocols, mitigating risks of fraud.
- Translated Figma mockups into Next.js web application, contributing 5000+ lines of code to front-end and back-end systems.

Chief Techonological Officer & Co-Founder

Apr. 2024 – Present

Noredio - Microsoft

Toronto, ON

- Co-founded **Noredio**, a Gen-AI song streaming platform, addressing copyright challenges in creative content; backed by **Microsoft Startups Hub**, awarded the **Moonshot Award**, and secured a \$130k investment.
- Led development of Noredio's app using **TypeScript** on **React Native** with a **Node.js** backend hosted on **AWS**, ensuring a scalable and responsive user experience.
- Utilized and incorporated AI accelerator chip to speed up the song generation process.

Artificial Intelligence Research Intern

May 2024 - Present

Dynamic Optimization Lab

University of Toronto

- Conducted research on AI trends with National Information Society and Ministry of Science, re-evaluating federal laws related to AI implementation and development.
- Contributed to the **reconstruction of the Korean AI law** system by drafting **50+ pages** of research paper.
- Predicted crop yield using deep convolutional neural networks and implemented the Adadelta training algorithm to improve projection accuracy.
- Incorporated computer vision and sensor fusion techniques, enhancing accurate detection.

Robotics Research Intern

Jun. 2023 – Aug. 2023

 $Control\ and\ Optimization\ Research\ Lab$

Seoul National University

- Infused Model Predictive Control into reinforcement learning for autonomous driving using ROS.
- Implemented real-time control strategies for autonomous vehicles in high-dimensional systems, accounting for uncertainty in sensor data and environment dynamics to enhance prediction accuracy.
- Contributed to 7000+ lines of code, integrating ROS for vehicle control, obstacle prediction, and mapping systems.

Artificial Intelligence Research Intern

Jun. 2023 – Aug. 2023

Vision and AI Lab

Korea University

- Transitioned from Variational Recurrent Autoencoder to Transformer-based architecture for heartbeat anomaly detection, achieving a performance increase from 67% to 98%
- Integrated PatchCore into TimeSeries Anomaly Detection in healthcare systems, enhancing system reliability.
- Contributed 10k+ lines of code to implement detection models, including CNN, VRAE, and Transformer.

Projects

Heals on Wheels | Pytorch, SQLite, Arduino, OpenAI API, Scikit-Learn

May. 2024 - Aug. 2024

- Developed an autonomous medical assistant robot using LiDAR and ultrasonic sensor fusion for obstacle avoidance.
- Implemented a Random Forest Classifier for diagnosis and medication suggestions, integrating GPT-3.5-turbo.
- Centralized diagnostic data in a SQLite database for streamlined access, improving healthcare efficiency and accuracy.

Exampedia | Amazon S3, Amazon Textract, AWS Lambda, Amazon API

Apr. 2024 - May 2024

- Developed a comprehensive student website using Amazon S3 for storage and Amazon Textract to extract and categorize exam questions by topics and difficulty.
- Leveraged AWS Lambda for serverless computing to manage requests efficiently and integrated Amazon API for seamless
 data retrieval and processing.