

DONGHAN KIM

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EDUCATION

University of British Columbia

Vancouver, BC

BSc: Honours in Computer Science, Software Engineering option (4th Year)

Sep. 2022 – Present

- CGPA: 4.10/4.33 (Average: 89.6%)
- NSERC Undergraduate Student Research Award recipient (2025, 2026)
- Admitted to the competitive Software Engineering option, limited to 30 students based on academic performance

TECHNICAL EXPERIENCE

Undergraduate Research Assistant

Vancouver, BC

University of British Columbia

May 2025 – Present

- **Research focus:** Optimizing serverless resource allocation to reduce provider costs while preserving **SLAs**
- Built **benchmarking tools** to validate a SimPy-based serverless simulator against real cloud execution behavior
- Provisioned and tested **80+ cloud instances** with Terraform to characterize performance and throttling behavior
- Built **Slurm-based HPC workflows** on the Alliance CCDB cluster to run large batches of simulations in parallel
- Collaborating on current work to extend the simulator for **LLM-oriented serverless workloads**

Undergraduate Teaching Assistant

Vancouver, BC

University of British Columbia

Sep. 2025 – Present

- Teaching Assistant for CPSC 313 and CPSC 317, covering systems, computer architecture, and networking
- Led tutorials and office hours on assembly-level programming, OS concepts, network protocols, and DNS resolution
- Developed tutorial materials and received strong student evaluations, with SEI averages of 4.7–4.9/5

Web Developer Intern

Remote, Germany

Phytometrics UG

Sep. 2023 – Dec. 2023

- Worked on full-stack web application development using React.js, Node.js, and MongoDB

TECHNICAL PROJECTS

Interactive DNS Resolver Visualizer | Personal | *TypeScript, C, Next.js*

May 2026 – Present

- Building a web-based DNS resolver visualizer that turns iterative name resolution into game-like node exploration
- Implementing a C-based DNS resolver with UDP sockets, DNS packet parsing, and iterative nameserver traversal
- Planning a Next.js API route to connect the resolver with a PixiJS-based animated frontend

Secure Healthcare IoT Gateway | Academic | *Python, Terraform, AWS*

Nov. 2025 – Dec. 2025

- Built a prototype gateway for simulated healthcare IoT traffic with policy-based request validation
- Implemented TLS metadata checks, audit logging, and access-control logic for security-sensitive device data
- Provisioned AWS Lambda and S3 with Terraform and validated behavior with unit tests and failure simulations

Eclipse | Collaborative | *C++, OpenGL*

Sep. 2025 – Dec. 2025

- Collaborated in a 7-person team to build a C++/OpenGL top-down shooter
- Voted best game in CPSC 427 (Video Game Programming) for the term by an invited industry jury

CERTIFICATIONS

AWS Certified Solutions Architect – Associate

May 2025 – May 2028

TECHNICAL SKILLS

Languages: C, C++, Java, Python, TypeScript, Go, Bash

Frameworks/DB: Node.js, React.js, Next.js, JUnit, pytest, SimPy, MySQL, MongoDB

Cloud/Infra: AWS, OCI, Terraform, Docker, Kubernetes, Linux, Slurm, Git