

Seungjae Baek

Software Developer | Full-Stack & Networking Systems

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Education

Bachelor of Science, Applied Computer Science (Network Security Applications Development)

British Columbia Institute of Technology (2025 September – 2028 December)

Diploma, Computer Systems Technology

British Columbia Institute of Technology (2023 January – 2024 December)

Experience

Full Stack Developer & Systems Administrator

Jan 2026 – Mar 2026

BCIT Retirees Association

- Identified and pitched a cost-reduction strategy to stakeholders, proposing an on-premises server migration from AWS
- Migrated MySQL database and application services from AWS RDS/EC2 to a self-hosted local server, reducing cloud costs by 95%
- Configured Cloudflare Tunnels to securely expose the local server to the internet without a static IP
- Transferred domain registration to Cloudflare, consolidating DNS management and eliminating AWS Route 53 costs

Full Stack Developer (Practicum)

Sept 2024 – Dec 2024

BCIT Retirees Association

- Collaborated with BCITRA stakeholders to convert a legacy desktop system into a full stack production web application
- Delivered on time in a 6-week project window, aligning with client expectations and technical requirements through bi-weekly Zoom meetings
- Built and deployed scalable backend services using Node.js and MySQL (AWS RDS), and managed deployment using AWS EC2 and Nginx reverse proxy
- Led UI/UX development using HTML, CSS, and JavaScript under Agile sprint cycles

Projects

AethersJournal

Apr 2025 – Apr 2026

<https://github.com/SJB7788/AethersJournal> | .NET, Blazor, ASP.NET Core, PostgreSQL, Docker, Azure, Gemini API

- Integrated AI-assisted reflection features using Google Gemini API to generate summaries and guided reflective questions
- Implemented persistent storage using PostgreSQL with Entity Framework Core and migrations
- Implemented user authentication and authorization using ASP.NET Core Identity
- Automated deployment to Azure using GitHub Actions CI/CD pipeline

Praxis

Sept 2025 – Dec 2025

<https://github.com/KagaSumi/Praxis> | Next.js, Tailwind, Node.js, Express, MySQL, Docker

- Collaborated in a three-person team to containerize and deploy a microservice architecture using Docker for local and production environments
- Built a Next.js frontend consuming a Node.js/Express backend through a Nginx reverse-proxy gateway, integrating Google Gemini API for AI-powered question answering

Skills

Frontend: Next.js, Blazor (.NET), HTML5, CSS3, Tailwind

Backend: Node.js, Express, ASP.NET Core, REST API Development

Languages: JavaScript, TypeScript, C, C#, SQL, Python, Java, Go

DevOps & Infrastructure: Linux, Docker, Git, GitHub Actions, Nginx, Cloud Deployment (AWS, Azure)

Projects

Reliable UDP Communication System

Nov 2025 – Dec 2025

<https://github.com/SJB7788/Reliable-UDP-Communication> | C, CMake, Python, hping3

- Designed and implemented a custom reliable messaging protocol over UDP using sequence numbers, acknowledgments, timeouts, and retransmission logic
- Built a client, server, and proxy to simulate packet loss and delay under configurable network conditions
- Simulated and analyzed system behavior under real-world network conditions to model reliability, latency, and recovery patterns
- Created a live Python-based graphical monitoring interface based on Proxy and Client log files

ArtificialGains

May 2023 – Apr 2023

<https://youtu.be/2NQdpDmuq1E> | React.js, Node.js, Express, MongoDB, Python, Docker

- Collaborated in a team of 3 to build a full-stack AI-powered fitness and diet app using OpenAI's GPT API for content generation and training insights
- Built frontend in React.js with TypeScript, designed mock-ups in Photoshop, iterated UX via peer feedback
- Integrated frontend features with backend APIs providing AI-generated content and training insights
- Collaborated on Docker-based containerization and deployment workflows

SnowScraper

Jan 2023 – Apr 2023

<https://snowscraper-7b189.web.app> | HTML, CSS, JavaScript, jQuery, Firebase, Firestore

- Collaborated in a team of 3 to build a web app that scrapes and compares prices of winter products across multiple ecommerce platforms
- Integrated frontend features with backend data from an automated web scraping service
- Built a responsive frontend using HTML, CSS, Bootstrap, and jQuery
- Integrated Firebase Authentication and Firestore for user accounts, product storage, and wishlist functionality

Self Portfolio

Sept 2024 – Present

<https://github.com/SJB7788/Portfolio> | HTML, CSS, JavaScript, Go, Docker

- Designed and built a personal portfolio website to reinforce core frontend fundamentals without relying on frameworks or AI assistance
- Implemented the frontend using vanilla HTML, CSS, and JavaScript, focusing on layout, styling, and browser interactions
- Developed a lightweight Go web server to serve static content and handle basic HTTP routing logic
- Containerized the application using Docker to support consistent deployment and portability