


Seungheon Chae

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EDUCATION

NSCC

Honours Diploma(90+) in Database Administration (**Database Engineer Concentration**)

Sep. 2023 – May 2025

Halifax, NS

Relevant Coursework: Database Administration, Big Data Systems, Programming, Data Analytics, Cloud Computing, Cyber Security, Web Programming, Full-Stack Development

EXPERIENCE

Software Engineer, Contractor

The Young Style Hair Salon

Oct 2024 – May 2025

Halifax, NS

- Built a responsive **marketing website** from scratch using **HTML, CSS, JS, Bootstrap** with clear IA, mobile-first layout, and accessible UI patterns.
- Optimized page performance and discoverability (**lazy-loading** images, asset minification, semantic HTML, basic **SEO** tags), improving first-load experience on mobile.
- Launched and maintained a production site on **Netlify** with **Git-based** deploys, serving **100+ daily users**; shipped **weekly** content/promo updates.
- Cleaned **50,000+** salon records with **Python (pandas, NumPy)**; engineered features and built lightweight **segmentation models** to generate **hair-type/product recommendations**.
- Provided **data analysis-based insights** to the client; findings were applied to weekly **marketing** materials and **product promotions**.

Software Engineer, Co-Founder

NSCC Student Portal

Oct 2024 – May 2025

Halifax, NS

- Led **full-stack** development with **PostgreSQL**; designed a realistic **ERD** (Students, Instructors, Courses, *Sections*, *Enrollments* junction, Grades, AuthUsers) and normalized to **3NF** with **FKs/cascades**.
- Shipped core features: **Job Application Tracker** (applied/interview/offer dashboards), **Book Exchange** (Reddit-style threads + lightweight chat), **Instructor Ratings**, and **AI Portfolio Creator** (résumé ingest → keywords via **DeepSeek API** → static portfolio generation).
- Implemented **Node.js** services over **REST/JSON** with validation & auth; integrated **Azure REST APIs** (e.g., **Storage/Blob** uploads via signed URLs, **Entra ID** token flows) and transaction-safe **PostgreSQL** access modules.
- Optimized database performance — reduced average query latency from 220ms to 180ms (18% faster) with keyset pagination, targeted indexes, and SQL tuning (validated using **EXPLAIN ANALYZE**).
- Invited by a professor to **commercialize**; validated demand with a **20+** NSCC student pre-launch waitlist.

PROJECTS

Hadoop Cluster Setup & Big Data Analysis | *Hadoop, Apache Spark, Linux, Shell Scripting, SQL*

- Configured and managed a multi-node **Hadoop cluster** for large-scale data analysis and storage optimization.
- Implemented **Apache Spark** pipelines for distributed processing and real-time stream analysis.
- Automated ingestion, processing, and monitoring with **custom shell scripts**, improving system reliability.
- Performed usage analysis to identify trends and enhance cluster performance.

Python Console Application | *Python, Pandas, NumPy*

- Developed a console-based application to organize and manage large datasets, supporting efficient sorting, filtering, and manipulation.
- Optimized data processing workflows with **pandas/NumPy**, reducing manual organization time and enabling scalable dataset handling.

CERTIFICATIONS (Additional 15+ certifications in Python, SQL, Data Analytics, Cybersecurity)

- AWS Academy Graduate – Cloud Foundations
- Cisco CCNA (Networking Essentials)
- CompTIA IT Fundamentals, Security+

TECHNICAL SKILLS

Programming & Scripting: Java, Python, JavaScript, HTML/CSS, Shell Scripting

Data & Database: MongoDB, Oracle SQL Developer, MySQL, PostgreSQL, Data Governance, Microsoft SQL Server, ERD

Libraries & Tools: Pandas, NumPy, Microsoft Excel, React, Node.js, Azure API, Hadoop, MapReduce, Apache Spark

Systems & Networking: Linux, Windows Management, Server Management, Server Automation, Network Security