Seungheon Chae

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EDUCATION

NSCC Sep. 2023 – May 2025

Honours Diploma in Database Administration (Database Engineer Concentration)

Halifax, NS

• Completed with **High Distinction (95+/100)**; recognized in the **top 0.1%** of the cohort.

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

EXPERIENCE

Software Engineer, Contractor

Oct 2024 – May 2025

The Young Style Hair Salon

- 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

Oct 2024 – May 2025

NSCC Student Portal

- 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 Al 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.
- Improved retrieval speed with targeted **indexes** and SQL tuning (**EXPLAIN ANALYZE**, keyset pagination); iterated with user feedback to refine UX and information architecture.
- 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