Kyle R. Knot

Email: KyleKnot@outlook.com **Cell:** (306)441-6632 **LinkedIn:** www.linkedin.com/in/kyle-knot
GitHub: https://github.com/knot427 **Portfolio:** https://knot427.github.io/KyleKnotsPortfolio/

Education

University of British Columbia

Bachelor of Science, Majoring in Computer Science
September 2018 – May 2022

Technical Skills & Knowledge

Languages	Technologies	Environments	Ideologies
Java, Python, TypeScript, JavaScript, SQL, C, C++, Rust	Relational Databases, NoSQL, Data cubes, AWS, .NET framework, Node.js, GIT	GitHub, Visual Studios, VS, Code, IntelliJ, Eclipse	AGILE development, SCRUM, REST APIs, Unit Testing

Projects

Forrest Fire and Flood Monitoring

The main product of Hopeland Systems, that I was responsible for designing the architecture and building. It used an array of sensor communicating with AWS IoT through LoRaWAN and stored the data in a DynamoDB table.

- Explored AWS services and decided the best fit for our use case based on speed, scalability, and cost.
- Configured AWS IoT core to insert data into a DynamoDB table.
- Made use of AWS Lambda to decode encoded data.

Water System Querier

A school project that could be used to track watershed and ecosystem health long-term. With the ability to gain insights about the health of these systems through complex queries.

- Designed and set up a MySQL relational database in Boyce-Codd Normal Form.
- Built a Java backend server that processed queries and communicated with the database.
- Built an Angular frontend that allowed users to view, add, remove, and preform more complex queries on the data.

Course-Classroom Query Engine

A school project that allowed a user to preform complex queries over class and building data to help select classes and decide on room bookings.

- Created an efficient depth first system that interprets queries in an EBNF specified language.
- Created a backend server using express and Node.js that efficiently allowed for addition, modification and querying of relevant data.
- Developed a pure html and JavaScript frontend that allowed for querying using REST APIs
- Added functionality that saved current workloads to disk, allowing backing up current work and recovery in the case of crashes.

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Recent Work Experience

Hopeland Systems – Backend Developer

August 2022 – December 2nd, 2022

- Planned and implemented a backend system utilizing multiple AWS services including IOT core and DynamoDB.
- Wrote scripts to interact with AWS and manipulate data stored within.
- Interviewed potential UI/UX developers and designers.

Little Loon Regional Park Golf Course – Head Groundskeeper

April 2021 – September 2021

- Assumed role of golf course manager mid season. Increased duties included scheduling of employees, technical knowledge of instruments and equipment, trouble shooting overall areas of the golf course.
- Independently learned new skills, closing skill gaps in necessary functions.
- Managed inventory.
- Maintained and repaired equipment.

L&M Wood Products – Data and Computer Specialist

April 2019 – September 2019

- Organized archived data which led to significant time savings when accessing historic data.
- Developed new data entry formats that significantly reduced data miss management and miscommunication.
- Automated data processes causing significant time savings for several different departments.
- Developed new data organisation protocols that preserved efficiencies I created after I left.
- Assisted with assorted IT issues.

Extracurriculars

UBC CTF team

January 2020 – May 2020

- Developed skills related to computer networking, cryptography, and low-level execution of programs
- Competed as part of UBC's CTF team in international competitions

SHAD

Queens University

July 2017 – August 2017

- Developed business management skills
- Designed a product concept
- Presented a business pitch