

Rowan Lindsay

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EDUCATION

- **The University of British Columbia** Vancouver, BC
Bachelor of Science (BSc) in Computer Science *Sept. 2017 – Present (3rd Year)*
 - 2-Time Dean's Honour List Student
 - Enrolled in Honours Computer Science program, exploring opportunities for undergraduate research.
 - Studying subjects such as computational optimization, compiler design, and database management.

EXPERIENCE

- **Cisco Systems** San Jose, CA
Software Engineering Intern (Innovation Labs) *Jun 2019 - Aug 2019*
 - Helped engineer an end-to-end solution for data extraction, transformation, and visualization used for research on the capabilities of wireless networking network devices.
 - Worked in a highly constrained environment, for example dealing with time synchronization in the neighbourhood of 10 nanoseconds.
 - Responsible for the design and prototyping of a large system, as well as its maintenance and extension as new functionality became necessary.
 - Prepared and documented performant versions of software to be used by a product-team.

PROJECTS

- **Prototyping a Safe, Concurrent Key-Value Store with Rust:**
 - Worked on a team of five students working to create a working Redis clone demonstrating various features of the relatively new Rust language.
 - Personal responsibilities included extensive background research into PL safety features and implementation of key-value stores, as well as the actual coding of our prototype.
- **Exploratory Analysis of Reddit Data:**
 - In a series of notebooks and code examples, I examined the effectiveness of n-gram feature encoding, various dimensionality-reduction and data visualization techniques and unsupervised learning model on subreddit language data.
 - Examined relationships between communities on the basis of content, with the goal of designing a recommender system for feeds without collaborative filtering.

SKILLS

- **Primary Programming Languages:** Python, C, TypeScript. Experience in others including Java, Haskell, Golang.
- **Systems-Level Networking (Hardware and Software):**
 - Familiar modifying and flashing firmware to general-purpose wireless networking devices, as well as implementing socket-level programs using a number of different protocols including TCP, UDP, and ICMP.
 - Solid knowledge of concepts like IP packet structure and networking layers.
- **Full Stack Application Development:**
 - Experience engineering and deploying scalable backends using popular frameworks and backend languages like Python; exposing systems via REST APIs and real-time views.
 - Capable of working with UIs and with libraries for data visualization in both static and real-time settings, including Plotly and high-performance gui engines like PyQt.
 - Interested in learning more about application scalability and deployment tools like distributed serverless functions and application containers.
- **Algorithms in Scientific Computing and Data Science:**
 - Comfortable interpreting, modifying, and implementing classic algorithms like the FFT, Stochastic Gradient Descent, and convolutions/correlations, and using these to understand or transform data.
 - Have worked on optimizations of these algorithms as well - for example, modifying certain methods to use heap-based sorting in a time-dependent system.