Emmett Collings

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Education

University of Calgary September 2019 – December 2022
Bachelor of Science, Major in Computer Science *Calgary, AB*

- GPA: 3.8/4.0
- Theoretical computer science focus
- Elective Highlights: Computer Security, Distributed and Randomized Algorithms, Compiler Construction, Database Design, Network Analysis, Retrogames

Experience

C++ Software Developer May 2022 – August 2022
Nobal Technologies *Calgary, AB*

- Worked with hardware and software to create and maintain smart mirror devices and their applications
- Large role in creation of smart mirror hospitality application
  - Contributed to system design for major rewrite of existing codebase for previous applications
  - Hospitality app provides functionality such as check in/out, ride share calling, room service, ticket booking
  - Integrated with several third party software platforms to provide the above functionality
- Technologies used: C++, Qt, QML

Software Developer Intern May 2021 – August 2021
Neo Financial *Calgary, AB*

- Worked with developer experience (DX) to create internal tools to aid developer efficiency
- Created private code coverage tool (github action + web app) that tracked test code coverage of repositories
- Created developer contribution tracking web app, which kept leaderboards of code reviews, PRs merged, etc.
- Technologies used: Typescript, Node.js, MongoDB, Next.js

Private Tutor September 2017 – June 2018
Self Employed *Calgary, AB*

- Specialized in high school physics and mathematics

Technical Skills

Languages: C++, Python, Assembly, Typescript/Javascript, C, Java
Libraries/Frameworks: Qt, Node.js, Jupyter
Developer Tools: git, bash, Linux, Windows
Databases: Mongodb, MySQL

Research & Projects

NHL Linemates Network | *Python, Jupyter* September 2022 – December 2022

- A network analysis of the effects that hockey players have on their linemates
- The links between players are invesigated using network science techniques such as community detection and degree centrality to determine players that effectively improve their teammates
- Makes use of data and network science as well as statistics for analysis
- Results summarized in an academic paper which can be found on my GitHub

Bubbie-VI | *6502 Assembly* September 2022 – December 2022

- A game written in 6502 assembly for the Commodore VIC-20
- Players must retrieve lost pet ducks in a dungeon while dodging enemies
- Resource constrained (3.5K of memory available on the VIC-20)
  - Created ad hoc data compression schemes
  - Required efficient and small code
  - Uses self modification on code and data to increase space efficiency further

Awards & Interests

Awards

- National AP Scholar (2015)
- National Swimming Championship Qualifier (2013-16)
- High School Div 3 City Champion – Volleyball (2014)

Interests

- Reading – Classical literature, non-fiction
- Sports – volleyball, badminton, swimming, climbing
- Outdoor – backpacking, scrambling, canoeing