Colton Blackwell

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SKILLS

- **Languages:** Python | C# | Java | C | C++ | SQL | JavaScript | Rust | Bash | HTML/CSS | X86-64 Assembly
- **Technologies:** MySQL | Git | GitHub | Unix command line | Wolfram Alpha | Excel | Visual Studio Code
- **Design:** UML Diagrams | EER Diagrams | Object Oriented Programming | Database Normalisation | REST
- **Operating Systems:** Windows | Ubuntu (Debian) and Manjaro (Arch) Linux | MacOS | Android | iOS

WORK EXPERIENCE

Software Developer Intern 02/2025 - present
Quant Valuations

- Implemented a chatbot using the OpenAI API and Python to streamline business valuation processes.
- Employed BeautifulSoup to efficiently extract and process URL web data, enhancing analysis.
- Automated financial metric extraction from company statements, reducing manual data entry time by 80%.

Skills: Python | OpenAI API | PyPDF | JSON| Financial Analysis | API Integration | Error Handling | BeautifulSoup

PROJECTS

COVID-19 Prognosis Predictor with Classification Models (link) 04/2024

- Modelled predictions for COVID health outcomes given patient information such as location, sex and age.
- Used the Pandas Python library to read, manipulate, and reshape data in a readable and efficient way.
- Utilized the scikit-learn Python library for training KNN, Naive Bayes, and Random Forest classifiers.

Skills: Scikit-learn | Pandas | Data Pre-Processing | KNN | Naive Bayes | Exploratory Data Analysis | Classification

K-Means Clustering for Single-Cell RNA Sequencing (link) 03/2024

- Implemented the K-Means and K-Means++ Algorithms in Python for clustering a single-cell RNA dataset.
- Analysed the silhouette coefficient for tuning the hyperparameter K for the optimal number of clusters.
- Used Matplotlib to visualise multidimensional clustering in 3D space by assigning colours to each cluster.

Skills: Python | NumPy | K-Means and K-Means++ Algorithms | Clustering | Overfitting | Hyperparameter Tuning

Arcade-Style Maze Chase Video Game (link) 09/2023 – 12/2023

- Collaborated on a small team following an agile development process to design and deliver a video game.
- Won an award for placing in the top three most innovative games voted on by competing game developers.
- Used Java, Maven, and Git for collaborative development, integrating with JPanel and Graphics2D for UI.

Skills: Java | Maven | Working on a Team | Unit Testing | JaCoCo | GitHub | UML Diagrams | Code Reviews | OOP

HACKATHONS

Competitive Gamified Trivia Website: New Leaf (link) 10/2023
SFU Fall Hacks

- Designed, implemented, tested, and hosted an interactive website, scoping work for the 12-hour hackathon.
- Implemented a Finite State Machine in JavaScript for reliably tracking trivia player turns and progression.
- Integrated the client-side JavaScript logic with a responsive website written in Bootstrap, HTML, and CSS.

Skills: JavaScript | CSS | HTML | Git | Time-boxing | Static Website Hosting | Bootstrap | Responsive Web Design

EDUCATION

BSc. in Computer Science 09/2021 – 04/2025
Simon Fraser University (SFU) Burnaby, B.C. Canada

Courses: Advanced Data Structures & Algorithms, Databases, Data Mining, Distributed Systems, Maths, Statistics