ERFAN SHAFAGH

✉ Email   ⓖ GitHub   in LinkedIn   🌐 Portfolio

SUMMARY

A skilled and detail-oriented Computer Science student with Python, C++, C and Java expertise. Experienced in machine learning and data science, with a strong track record in team projects. Knowledgeable in Python libraries like NumPy, Pandas, and PyTorch.

SKILLS

- **Programming Languages:** Python, C++, C, Java
- **Database:** SQL, PostgreSQL, SQLite
- **Version Control:** Git, GitHub
- **Data Science:** NumPy, Pandas, Matplotlib, PyTorch, Scikit learn
- **Software and Services:** Matlab, Jupyter Notebook, IDEs, Google Colab, MS Office
- **Technical:** Data Structures and Algorithms, Problem Solving, Debugging, Object-Oriented Programming, Agile Methodology
- **Soft Skills:** Teamwork, Strong Communication Skills, Reliable and Responsible

PROJECTS

Fraud Detection   **Nov 2024 - Present**
Under Supervision of Dr. Tayebi | Extracurricular | SFU
- Implemented advanced data processing techniques to prepare prescription datasets for detecting fraudulent activities.
- Applied unsupervised learning algorithms to identify anomalies and uncover patterns.
- Gained experience with real research projects focused on complicated datasets.

Cinepass   **Sep - Nov 2024**
Intro to Software Engineering | CMPT 276 | SFU
- Engaged with a team of six to develop a web application to manage movie listings, user registrations and reservations.
- Developed secure user authentication and event bookings through PostgreSQL database and Spring Boot framework.
- Delivered project efficiently by applying Agile methodology and participating in iterative development cycles.

Movie Title Generator   **July 2024**
Self-directed Project   *GitHub*
- Developed a Multilayer Perceptron (MLP) to generate creative movie titles.
- Implemented and trained the model using PyTorch and CUDA for GPU acceleration.
- Processed and prepared a dataset of movie titles for training the neural network.

Database Management   **Apr 2024**
Database Systems | CMPT 345 | SFU   *GitHub*
- Created a responsive database system with a teammate using SQLite which manages and organizes large data.
- Applied entity-relationship, database design, SQL schema creation, data population, and Python application development.
- Designed multiple normalized tables, ensuring data integrity and consistency and implemented complex queries.

Socket Networking Chat Program   **Feb 2024**
Operating Systems |CMPT 300 | SFU   *GitHub*
- Engaged with a team to use UDP sockets in C to achieve two-way communication between users over a network.
- Handled simultaneous operations by utilizing a multithreaded approach to enhance the responsiveness of the chat program.
- Ensured efficient system communication by using UDP sockets to Implement a reliable messaging system.

Spotify API   **Jun 2023**
Self-directed Project   *GitHub*
- Developed a Python script to process audio files, extract metadata, and update a Spotify playlist.
- Integrated with the Spotify API to search for songs and add them to a specified playlist.
- Included multiple audio file formats, using multiple libraries to support MP3, FLAC, and M4A.

EDUCATION

Bachelor of Computer Science   **Jan 2023 – Present**
Simon Fraser University   *Burnaby, BC*
- Current CGPA: 3.28
- Expected graduation date: Late 2025
- Relevant courses: Machine Learning, Computer Vision, Operating Systems, Database Systems.

TEACHING EXPERIENCE

- **Python Tutor**   **Feb - Mar 2023**
  Simon Fraser University | Burnaby, BC   *Volunteer*
  Utilized diverse teaching methods, ensuring the student could grasp the Python material effectively.