

Shahriyar Shawon

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Education

Drexel University

Master of Science in Computer Engineering

Philadelphia, PA

September 2025 – Present

Drexel University

Bachelor of Science in Computer Science

Philadelphia, PA

September 2020 – June 2025

Experience

Independence Blue Cross

Application Developer (Contract)

Philadelphia, PA

September 2025 – January 2026

- Implemented full-stack enhancements to a React + Flask application, introducing query result limits to improve performance, scalability, and API responsiveness
- Designed and built BigQuery SQL views using provided data mappings, with a focus on Type 2 slowly changing dimension (SCD) logic to accurately track historical data changes
- Extended and maintained existing SQL queries and shell scripts to incorporate new data attributes and downstream reporting requirements

Susquehanna International Group

Software Engineer Co-op

Bala Cynwyd, PA

September 2023 – March 2024

SFG Team | C#, .NET Framework, MySQL, OracleDB

- Enhanced data cohesion and accuracy of stock data by developing a C#/.NET API to aggregate data from 15 MySQL and OracleDB sources
- Decreased redundant data fetching by 93% by redesigning a web app to use a central API
- Reduced stock information lookup time by 95% by introducing a caching mechanism

MDF Metadata Team | Django, Python, Linux, MySQL, PostgreSQL

September 2022 – March 2023

- Improved data accuracy and operational reliability by developing SQL-based monitoring scripts with PostgreSQL and Python to track file delivery integrity and timeliness
- Reduced alert configuration time for developers by 50% by creating a CLI tool that streamlined setup
- Improved a file-user identification tool by implementing multiple detection methods and custom SQL views and subqueries, resulting in more reliable attribution of file usage

CorpSys Team | C#, .NET, MicrosoftSQL, EntityFramework

September 2021 – August 2022

- Enriched an internal project management tool by aggregating developer, stakeholder, pipeline, and environment data using SQL joins and stored procedures to improve team collaboration and project tracking
- Improved query performance by 20% by reducing the use of bridge tables in MicrosoftSQL by using LINQ with EntityFramework
- Developed the front-end interface for an API to allow general-purpose alerts to be created

Projects

Drexel Course Scraper | Python, FastAPI, SQLite, Playwright, BeautifulSoup

- Scraped and parsed metadata for over 8,200 courses from Drexel's public courses page using a custom **Python** scraper with **Playwright and BeautifulSoup**
- Designed a normalized SQL schema to store and index course data across departments, fields of study, instructors, and schedule times

Dynamic Image Compression Engine | Python, C

- Built firmware in **C** for two RP2040 chips to interface with FPGA, IO Modules, and Power Monitor Chips
- Implemented custom image format to store lossy and lossless blocks of data using lossy and lossless codecs
- Engineered a pipeline to compare software-based encoding performance to hardware-based encoding

Skills

Languages: Python, C#, C, C++, Bash/Shell Scripting, HTML/CSS, JavaScript

Databases: BigQuery, MySQL, PostgreSQL, OracleDB, MicrosoftSQL

Frameworks: FastAPI, Django, Flask, BeautifulSoup, .NET Core, .NET Framework, Entity Framework, jQuery

Tools: Docker, Git, Gitlab CI/CD, Jira, Confluence, CMake, YAML