Tyler Lowe
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EDUCATION

Carnegie Mellon University, *Pittsburgh, PA*   *May 2023*
QPA: 4.0/4.0
Bachelor of Science in Information Systems
Minors: Software Engineering and Business Administration
Current Coursework: Foundations of Software Engineering, Introduction to Computer Systems, Internet of Things, Ethical Penetration Testing
Past Coursework: Principles of Software Construction, Application Design & Development, Principles of Imperative Computation, Fundamentals of Programming and Computer Science, Database Design and Development
Honors/Organizations: Dean's List with High Honors (2019-2021)

SKILLS

- Java, Python, Ruby, C
- Ruby on Rails Framework
- HTML, CSS, JavaScript, Bootstrap4
- SQL, Postgres, SQL Server, Database Design and Development, MongoDB (familiar)

PROJECTS

Java Carcassonne Game
- Crafted software design artifacts in UML to guide development including a domain model, system sequence diagram, behavioral contract, object-level interaction diagrams, and an object model
- Implemented codebase (~5,000 lines) with Java 11 OOP utilizing the controller, creator, and information expert heuristics
- Practiced good design principles of code abstraction, information encapsulation, high cohesion, and low coupling
- Preformed unit and end-to-end testing with Junit to ensure correct functionality
- Created a GUI for the program using Swing, event-driven programming, and the observer design pattern

Trading Analytics Framework
- Performed a domain analysis on stock trading to extract key data sources, possible visualizations, and data types for the framework
- Implemented a black-box framework codebase in Java 11 OOP with both a data-source and display plugin interface
- Built a GUI for the framework using Swing, event-driven programming, and the observer design pattern
- Created 3 data source plugins and 3 display plugins (XChart) as samples
- Performed unit and end-to-end testing in Junit to ensure proper functionality
- Placed as a top 3 framework for the class
- Provided technical support for 13 teams (33 people) using the framework and implementing data/display plugins

GrubHub Database Project
- Researched GrubHub and created 3 users with 10 user stories for potential database interactions
- Sketched conceptual model in UML to map necessary entities and attributes, relationships between entities, and cardinalities
- Translated conceptual model to logical model, created cross-reference tables when possible and identified primary/foreign keys
- Normalized set of relations to BCNF then created physical model with Vertabelo and SQL
- Implemented additional Postgres triggers and functions for the database
- Realized the user stories via Python 3 and Psycopg2 by creating queries that utilized CRUD principles

WORK AND LEADERSHIP EXPERIENCE

Data Engineer and Management Intern — First National Bank Corporation, *Pittsburgh, PA*   *May 2021 – Present*
Carnegie Mellon University — 15-110 Teaching Assistant, *Pittsburgh, PA*   *Aug 2020 – Feb 2021*
- Lead an hour-long recitation with 25+ students weekly
- Hosted 2-3 hours of office hours weekly and answered questions on Q&A platforms
- Graded class assignments and exams
- Organized review sessions for class and generated practice problems for exams

CVS Health — Operations Supervisor, *Berkeley, CA and Pittsburgh, PA*   *Jun 2020 – Jan 2021*
- Supervised and delegated tasks amongst 3-5 employees during a typical shift
- Managed inventory logistics (loading & stocking) and handled thousands of dollars' worth in damages monthly
- Handled store financials and opening/closing
- Helped ensure store achieved a baseline of 90% customer satisfaction
- Previous Roles: Shift Supervisor (Mar 2019-Jun 2020), Store Colleague (Nov 2018-Mar 2019)