Steven Xia

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EDUCATION

University of Michigan College of Engineering, Honors Program **Ann Arbor, MI**
Bachelor of Science and Engineering in Computer Science *Expected Graduation: April 2024*
GPA: 3.94 / 4.0
Coursework: Advanced Operating Systems, Database Management Systems, Web Systems, GPU Programming, Data Structures and Algorithms, Theory of Computation, Computer Organization, Circuits, Linear Algebra
Future Coursework (taken before summer 2023): Distributed Systems, Computer Networks, Machine Learning / AI

University of Michigan Ross School of Business, Business Minor Program **Ann Arbor, MI**
Coursework: Accounting, Economics

EXPERIENCE

University of Michigan, College of Engineering **Ann Arbor, MI**
Instructional Assistant for EECS 484: Database Management Systems *August 2022 – Present*

- Work with Professor H. V. Jagadish to operate an advanced-level Database course of ~300 students
- Teach weekly discussion classes and host 1-on-1 office hours to reinforce understanding
- Answer questions on course material through online platforms such as Piazza and Discord
- Create homework and exam problems and host group review sessions to explain solutions

CyberCube Analytics **New York, NY**
Data Analyst Intern *May 2022 – August 2022*

- Wrote Python-based filtering algorithms that process cyber risk data in various formats / schemata, update the company PostgreSQL database, and perform queries to match vulnerabilities to client companies
- Automated data-collection by setting up scheduled calls on numerous data-feed APIs
- Migrated resources to a new AWS account and set up infrastructure using Terraform and CloudFormation
- Set up CI/CD pipeline for the Data Collection Team's AWS workflow using GitHub Actions

PROJECTS

Michigan Aeronautical Science Association Avionics Programmer (Python3 | PyQt5 GUI Framework)

- Worked in a team of over 100 students to build a 50,000 ft. liquid bi-propellant rocket
- Developed, debugged, and tested flight data-viewer GUI, which improved data accuracy and visualization

FakeBook (Oracle SQL*Plus & MongoDB)

- Simulated social media database, storing information about users, friendships, photos, messages, etc.
- Implemented complex schema with 15 tables. Used methods such as triggers, sequences, etc.
- Performed queries involving inner / outer joins, nesting, grouping, union / intersection, ordering, etc.

Piazza Classifier (C++)

- Implemented Naïve Bayes Classifier machine learning algorithm to classify categories of Piazza posts
- Trained on a data set of 10,000+ past posts, which resulted in prediction accuracy of ~80%

Zookeeper (C++)

- Implemented Prim's Algorithm to find the MST of "animal cages" in a "zoo", represented as coordinates
- Used random-insertion heuristic (efficient) and branch-and-bound algorithm (optimal) to find TSP paths

Maze Solver (C++)

- Developed depth-first and breadth-first search algorithms to find paths out of 3D rectangular mazes that contain walls, floor tiles, and elevators. Implemented backtracking to record the path taken

SKILLS

Languages: C++, C, Python, Java, JavaScript, HTML/CSS, Oracle / Postgres SQL, Assembly, YAML, MATLAB
Certifications: AWS Certified Cloud Practitioner, DeepLearning.AI Machine Learning Specialization
Frameworks / Libraries: STL (up to C++20), JDBC, CUDA, TensorFlow, PyQt5, CMake
Technologies: AWS, Docker, Ubuntu Linux, Windows, MacOS, Git, JetBrains Suite, Microsoft Office