Ash Sze
ashysze@gmail.com | (781) 219-7422 | Somerville, MA

EDUCATION

Tufts University | Somerville, MA   Expected May 2024

Master of Science in Data Science

Bachelor of Science in Biomedical Engineering and minor in Computer Science, Summa Cum Laude   GPA: 3.89/4.00

Relevant Coursework: Statistics, Big Data, Statistics, Machine Learning and Data Mining, Natural Language Processing, Database Systems, Data Structures, Linear Algebra.

SKILLS AND AWARDS

Programming Languages: Python (Scikit-learn), R, C++, C#, MatLab, JavaScript.

Computer tools: Google Analytics, GCP (Hadoop), Bash, SQL, MS Excel and CAD/SolidWorks.

WORK EXPERIENCE

Tufts University, Data Structure Teaching Assistant | Somerville, MA   Jan 2024 – Present

- Lead office hours to provide homework support, practice class content and review code every Tuesday.
- Coordinate with Professor and TAs to best answer technical and logistical questions through Piazza in a timely manner.

Blancour, Marketing Analyst | Huntington Beach, CA   June 2023 – Sept 2023

- Integrated BERT LLM with analytical tools including Google Analytics to enhance keyword and trend identification, driving ROAS increase by 13% for key product categories.
- Spearheaded social media marketing campaigns through data-driven evaluation of over 16 competing products.
- Visualized complex data into charts, tables and diagrams for a non-technical audience using excel and matplotlib.

Think Academy US, Content and Web Developer | San Jose, CA   Dec 2022 – May 2023

- Designed JavaScript web math games followed by testing and optimization before use for the ThinkTeach online platform.
- Visualized data on grades, attendance and in-class behavior for parents using the student performance analytics dashboard.

Breakthrough Greater Boston, Math Teaching Fellow | Somerville, MA   June – Aug 2022

- Taught a 9th grade class of over 30 students using a personally developed algebra curriculum which continues to be used as a framework for future breakthrough teaching fellows.
- Ensured efficient querying in student information databases by optimizing indexes, formatting, and schemas.

RESEARCH EXPERIENCE

Machine Learning & Systems Biology Lab, Research Assistant | Somerville, MA   Jan 2024 – Present

- Research the role of retrieval-augmented generation in reducing LLM hallucinations during query for reaction optimization.
- Perform SQL and API query on subsets of the KEGG database for practical and analytical chemistry tasks.

Optical Diagnostics for Diseased Tissue Lab, Research Assistant | Somerville, MA   Sept 2020 – May 2022

- Instructed new research assistants to use Napari, Python data visualization tool, for annotating cells and silk in 10,000+ 3D engineered brain tissue TPEF images for use in deep-learning-based image restoration and segmentation models.
- Maintained concise annotation instruction and image pre-processing code documentation for other users.

ACTIVITIES

Hong Kong Student Association, Treasurer   Jan 2020 – May 2023

- Systematically organized club balance sheets using Excel to evaluate expenditure, earnings, budgets, and allocations for cross-cultural events and fundraising.
- Increased club membership by 34% through community engagement, social media promotion and active recruitment.

PROJECTS

Large Language Model Generated Text Detector for Kaggle, Programmer   Oct 2023 - Present

- Initiate dataset collection through web scraping and data cleaning in Python using relevant NLP libraries.
- Develop an ML neural network model using Python with a Tensorflow framework to output probability of AI text generation.

Tufts Simulator, Game Developer & 2D Artist   Sept – Dec 2021

- Implemented interactive and personally designed NPC portraits, player status bars and end screen splash art using C# in Unity.
- Guided artists and developers through integrating assets and setting realistic expectations in weekly directional meetings.