Lawrence Zhang

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EDUCATION

University of Maryland (3.63/4.00 GPA) — College Park, MD
B.S. Computer Science, Double Minor in Statistics & Computational Finance — *Planned: Fall 2025*
Select Coursework: Natural Language Processing, Deep Learning, Artificial Intelligence, Data Science, Computer Systems, Algorithms, Functional Programming, Web Application Development, Data Structures & Algorithms Financial Markets and Datasets, Statistical Inference & Estimation, Statistical Computing

EXPERIENCE

AbbVie SWE Intern — May. 2023 – Aug. 2023
AbbVie - JavaScript, HTML, SQL, Unit Testing, Regression Testing
- Created a full-stack internal project request website utilizing SQL and JavaScript for employees to request projects and SETI team members to manage projects and forecast development timelines.
- Performed unit testing and regression testing on internal company applications and identified bugs and enhancements in order to improve the UX of submitting and viewing vendor data
- Assisted in creation of testing process and error reporting for external adverse event reporting tool

College Park Student Investment Group - V.P. of Events — April 2023 – Present
University of Maryland - Python, Jupyter, NumPy, Pandas, Matplotlib
- Created Jupyter notebooks using Pandas and Matplotlib to visualize asset returns and analyze historical volatility for common indices and bonds across over 100,000+ timeseries datapoints
- Planned and organized instructional workshops for club members analyzing option fundamentals and greeks through a computational finance perspective with python backtesting
- Demonstrated backtesting and theoretical alpha strategies utilizing club custom backtesting and data analysis python libraries

PROJECTS

ExamIn | *Python, Firebase, Tesseract, Pandas, Git*
- NewEgg HackIMSA Hackathon 1st Place (1st out of 60+ teams)
- Designed and created a full-stack website with hackathon team to simplify AP Exam studying with an engaging and algorithmic study regimen using repetitive memorization
- Handled backend implementation using Firebase and Firestore to store account and question data
- Developed AI-powered scraper software with pytesseract using OCR to automatically parse and convert pdf exam questions to json data

KonTinkerer | *Python, Tkinter, FFmpeg, Kontakt*
- Developed an application to automatically and efficiently compress and modify hundreds of thousands of Kontakt audio sample libraries utilizing FFmpeg to compress audio
- Created custom GUI using tkinter allowing for bespoke workflows and custom file filters
- Implemented automatic installer and full windows file system integration to find relevant kontakt audio files
- Published to various Virtual Instruments forums to great positive reception and use

Cobalt | *Java, Spigot API, Javax MIDI, Reaper*
- Created a complex Minecraft music plugin to read and playback MIDI music files by implementing a custom independently threaded audio engine.
- Formatted and parsed JSON files to automatically map information to custom soundpool
- Automated sample editing and splicing with Reaper to create sample audio pool to match MIDI information
- Published to the ONBS community to great reception as well as utilization in commercial MC servers

TECHNICAL SKILLS

Languages: Python, Java, C/C++, Dart, SQL, JavaScript, Rust, Ocaml, MATLAB, SAS
Developer Tools: Linux/Unix, Firebase, Git, JIRA, Maven, JUnit, Pytest, Excel
Libraries: Pytorch, NLTK, Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn, Selenium