Haixin "Eleanor" Chang

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Master's student in technology with a mix of academic and hands-on project experience in software and a solid foundation in STEM background that includes a Ph.D. in Biomedicine. Seeking positions to continue learning and contribute to development of software solutions in a team environment.

EDUCATION

MCIT (Master's of Computer & Information Technology), University of Pennsylvania (expected December 2021)
Coursework: Mathematical Foundations of Computer Science, Computer Organization & Operating System Design, Algorithms & Computation, Computer Systems Programming, Data Structures & Software Design, Introduction to Software Development, Software Engineering, Database & Information Systems, Statistics for Data Science: An Applied Machine Learning Course, Computer and Network Security

Ph.D. Biomedical Sciences, Cornell University College of Veterinary Medicine

SKILLS

Technical: Python, Ruby on Rails, Java, JavaScript, React Hooks. Statistics software (Prism and JMP); SQL; git; HTML; CSS; data science libraries (Pandas, NumPy, Scikit-Learn, Matplotlib, SciPy); Jupyter; MongoDB; Neo4j
Research: Experimental design; data analysis; literature review; scientific writing and presentation; project management
Languages: Fluent English, Native Mandarin Chinese

CERTIFICATIONS

Triplebyte Certified Generalist Software Engineer by Triplebyte (Credential ID QWmi0F4); issued on Jan 2021; No expiration

EXPERIENCE

Software Engineering Intern, Flexport, Chicago — May 2021 – Aug 2021

- A full stack project to allow ops team to view and download all size of data from the procurement database: Paginate the data fetch from database and deliver incrementally to UI on demand. User can also download total and/or paginated data. Using React Hooks, Javascript, Rest API, Ruby on Rails, Rspec etc.
- Client-side concurrency and rate limiting on 3rd party vendor data bulk download requests: Modified and optimized back-end scheduler, rate limiter and task queue to prevent the loss of requests due to throttling. Using Ruby on Rails, Rspec.

Intern, Cornell Center for Technology Enterprise and Commercialization — Jan 2013 - June 2013

- Performed technical and market analysis for biotech inventions and licensing

Graduate Research Assistant/Postdoctoral Fellow, Cornell Dept of Biomedical Sciences — Sept 2005 - June 2012

- Conducted independent research on reproductive biology; collaborated with bioengineers and scientists; managed undergraduate research projects. Scientific writing, presentations, and publications

PROJECTS

- **Analyze effects of weather and demographics on COVID-19** – Interactive data exploration app using real-world data to design, construct and test database, running queries according to the user's options, etc. Using React, Javascript, HTML, CSS, Node.js, Python, Pandas, MySQL, AWS RDS.
- **C/Linux Projects** - Completed three projects using C and Linux system calls. Built a shell taking command line inputs and executing the commands, a shell executing redirection and two-stage pipeline, and a TCP client and server that does three-way handshake with single server, multi-threaded server, and event-driven server respectively.
- **Parking Analytics** (repo) - Used real-world parking violation data to build a tool to analyze violations using various segments (population, zip code, etc.). Focused on design strategies and patterns. Applied N-tiered Architecture design, Strategy and Singleton design patterns, and memoization. Application reads user input, builds corresponding data structures, and calculates and displays results. Built in Java, CSV, JSON.
- **Stock Analytics** - Built an interative stock analysis app that takes stock/ETF symbol and graphs its "VIX" (market volatility measure) term structure. Built a JSON parser to parse data from Yahoo Finance API, scraped option prices and yield curve data, and calculated and plotted price of a theoretical variance swap. Built in Java with JFreeChart and JFrame.
- **Student Chatbot** - Collaborated to build a web-hosted chatbot app AI assistant for students that answers natural language questions about course enrollment, student profiles, account balance, etc. Used Microsoft's Language Understanding Intelligent Service (LUIS) service to interpret questions with a custom trained model and a SQL Server student database. Developed using Azure's Bot Service tools, JavaScript, Node.js.

ACADEMIC PUBLICATIONS, PRESENTATIONS, & AWARDS

- Published five academic papers in high impact scientific journals and delivered abstract, poster, and invited in-person presentations at conferences in Japan, China, Germany, and the US.
- Earned multiple awards from Cornell and Syracuse and research grants from diverse organizations.