Lujia Cheng

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SUMMARY

Luke's background in chemistry and philosophy instilled in him a rigorous problem-solving mindset and the ability to analyze complex systems. Intrigued by technology's potential in the chemical industry, he decided to earn a master's degree in information science, a field encompassing algorithm design, data analysis, security, and human factors. His project portfolio demonstrates adaptability, a drive to continuously learn, and a commitment to developing impactful technology. This includes collaborating with the bioinformatics department to develop a patient record search platform (Patient Like Mine) used by UPMC physicians to improve data-driven treatment decisions, building and deploying a personal website from scratch with a custom AI chatbot to explore the frontiers of AI technology, and spearheading a community effort to translate the Screeps documents and APIs into Chinese, fostering accessibility for hundreds of developers.

EDUCATIONS

M.S. in **Information Science** | University of Pittsburgh | **GPA 3.8** 08/2022 – 05/2024

- Relevant Courses: algorithms, data structures, database, interactive system design, machine learning, network, cryptography

B.S. in **Chemistry** and Philosophy | Virginia Tech 08/2016 – 12/2020

- Relevant Courses: Software Design, Java, Ethics & AI

EXPERIENCE

Chemist | ChemPacific Corp, Baltimore, MD 05/2021 – 05/2022

- Optimized Good Manufacturing Practice (GMP) production procedures and automated High-Performance Liquid Chromatography (HPLC) testing, reducing daily workload by 30 minutes, streamlining processes, and minimizing machine idle time.
- Collaborated with QA and the National Medical Products Administration (NMPA) to ensure international chemical import/export compliance, demonstrating adaptability, meticulous attention to detail, and effective cross-cultural communication and negotiation skills.
- Translated complex synthesis processes into clear production guidelines for an overseas mass-production subsidiary, ensuring consistent quality across development and international production environments and facilitating effective cross-border collaboration.

PROJECTS

Full-stack E-Commerce Website | MongoDB, Express, React, Node.js | Interactive Demo (glitch.com)

- Developed a full-featured MERN stack e-commerce platform, including product search, shopping cart functionality, and user profile management.
- Implemented custom Python and shell scripts to fully leverage Glitch.com's Linux-based virtual machines, bypassing the constraints of its beginner-friendly CI/CD workflow.
- Utilized Docker Compose for local development and testing, ensuring consistent environments across different stages of development.

Personal Website with AI Chat Assistant | React, AWS, GitHub, Google Gemini | lujia-cheng.github.io

- Developed a personal website featuring an AI chat assistant trained on my resume, project details, and insights into my motivations and career goals.
- Leveraged React for front-end development, AWS Lambda for serverless architecture, and fine-tuned a large language model (Gemini/Gemma) for this specialized conversational experience.
- Integrated GitHub Actions for continuous integration and deployment, ensuring seamless updates and consistent performance.
- Implemented visitor monitoring using AWS CloudWatch to track website traffic and user interactions, optimizing performance and user experience.

Patient Like Mine | UI/UX, web dev, search engine

- Developed an internal patient record search platform for UPMC physicians, empowering them to rapidly evaluate treatment efficacy and make informed decisions.
- Led comprehensive UX research among medical professionals.

- Designed a highly intuitive UI based on research findings, ensuring seamless data retrieval while strictly adhering to Fast Healthcare Interoperability Resources (FHIR) standards.
- Orchestrated successful integration with a UPMC database, enabling secure and efficient data exchange.

Creative Python Project: Image to Staggered Brick Walls | Python | Illustrated Demo (github.com)

- A creative project that utilized Python packages (NumPy, scikit-image, scikit-learn) to generate color palettes from images and visually construct brick walls using the extracted colors.

LEADERSHIP & ACTIVITIES

- Led the University of Pittsburgh's delegation (*CyberPanther1*) to the CyberForce competition, spearheading a rapid response to sabotage during the 8-hour competition. Rebuilt the React frontend, migrated systems to a secure Linux virtual machine, and actively defended the infrastructure. Additionally, mentored our sibling team, contributing to an improved overall college ranking.
- Recognized with the *First Penguin Award* at Games4SocialImpact 2023 (University of Pittsburgh) game jam for developing "Bon Voyage", an innovative third-person exploration game focused on the theme of "age".
- Founded and maintaining Screeps China (github.com), a doc/API translation project that expanded access to hundreds of Chinese-speaking developers by translating essential documentation and APIs.
- Stabilized the Virginia Tech Parkour Club as *Treasurer*, managing finances, securing a 60% discount for members, and navigating leadership transitions during the challenges of COVID-19.

SKILLS

Programming Languages JavaScript, TypeScript, HTML, CSS, Java, Python, C#, C++, R, MATLAB
Frameworks ReactJS, Bootstrap, jQuery, Node.js, Express.js, Django, Flask, Spring Boot
DevOps Git, GitHub Action, CI/CD (proficient in collaborative workflows)
Cloud AWS, Azure, Docker
Databases MySQL, MariaDB, MongoDB, SQLite
Other Android, Unity, Linux, MS Office Suite
Soft Skills analytical, attention to detail, precision, adaptable, strong problem-solver, critical thinking, data-driven, effective collaboration, communication