Rong (Abby) Xu

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Education

Texas A&M University College Station, TX
Bachelor of Science in Computer Science with minor in Cybersecurity and Mathematics Expected: May 2023
Cumulative GPA: 3.8/4.0 Honor: Engineering Honors
Relevant Coursework: Principal of Statistic (R), Data Structures and Algorithms (C++), Discrete Structures in Computing, Engineering Computation (Python), Artificial Intelligence, Data Analysis for Cybersecurity, Parallel Computing, Unix System Admin, Cloud Computing

Skills

- Python (Proficient), C++ (Proficient), Java, JavaScript, TypeScript, HTML, SQL
- React, Flask, DynamoDB, Docker, VS Code, Vim, Git, Linux, Ubuntu Server, Latex, Markdown, PostgreSQL, JIRA, Figma

Internship Experience

Amazon | *Software Dev Engineer Intern of Fire-TV Telemetry Team* May 2022 - Aug. 2022
- Built a full-stack web portal to enable rest FireTV teams onboarding to the service involved with getting confidential on device log data, resulted in a 30% reduction in the overall process time and provided a universal platform for data collection and status tracking.
- Used React for the frontend, AWS's DynamoDB for an intermediate DB, and API Gateway for backend integration (CRUD data)
- Designed and wrote up detailed documentation regarding intermediate/backend API endpoints & database schemas

Splunk | *Technical Marketing Intern – Security* May 2021 - Aug. 2021
- Designed and built the ETL pipeline to import infosec vendor sample data from 200+ sources into a new globally distributed demos environment to improve the event and product marketing flexibility in use, providing cost-saving options on 60k annual demonstration across 3 regions with permission outside of isolation through unlocking data stuck within a static demonstration
- Exported sample data and Splunk Search Processing Language (SPL) code of dashboards to re-build corresponding demos on the cloud after generating a 1 billion row dataset in Python and connecting with Splunk Cloud by REST API for quicker result calling
- Transformed unstructured machine data, iterated utilization resulting in 75% run time improvement, and completed the 45-min ES demo presentation with another teammate

Research Experience

Portable Virus Detection Platform | *Innovation[X] SDE Group| Texas A&M University* | College Station, US Sept. 2021 – May 2022
- Aimed to assist a research project to detect air-born bacteria and viruses in aerosol samples involved with Bio Group and HDE Group
- Implemented portable Point-of-care testing with a graduate student, focusing on Android app, web portal and image processing
- Made the system enable user authentication, allow users to scan the in-droplet sample, get the result in 30s, and stored it in the cloud

Project Experience

iCfire (Aggies Invent 2022) April. 2022
- Designed a Helmet-mounted thermal imaging feedback device with 5 students to make firefighters aware of extreme temperature change
- Made a prototype using Arduino thermal camera and output elements to detect real-time temperature change and alert firefighters
- Awarded the Third Place Winner with 500 dollars reward

Nutritist Oct. 2021- Dec. 2021
- Built a web app with 4 teammates to help users track daily intake and generate recipes with agile development
- Used third-party APIs to get data, implemented backend with Flask framework, and deployed the website on Heroku with AWS database

Predicting & Preventing Wildfires Jun. 2021 - Aug. 2021
- Researched 4 online datasets about the California wildfire and analyzed the main causes (weather and temperature) in the past 20 years
- Brainstormed weather detection model with announcing system function and wrote a proposal adding data analysis and data visualization
- Delivered project ideas to one Startup introducing background information, data findings, and calls to action and received praise from the client with useful suggestions to improve in the future

Throne Locker (TAMUhack 2021) Jan. 2021
- Built a mobile app with 3 teammates and make a storage box to solve the American Airlines Challenge
- Used the Kivy library in Python to design UI page, worked on data transmission of cloud server
- Awarded the Best Hardware Hack Sponsored by Digi-Key among 150+ teams

Gikiyin (Educating Smart Marine Aggies Robotic Technologies Competition [eSMART]) Feb. 2020 - May 2020
- Led a team of 6 engineers to create a remote-controlled water vehicle, holding weekly meetings to discuss the design and project progress
- Improved code for connecting an X-box controller to the computer and EV3 controller to manipulate the boat in Python
- Awarded the First Place within 20 teams with 500 dollars reward

Campus Involvement

TAMU Datathon | *Design Lead* Mar. 2021 - Present
- Collaborated with 3 design members to design TAMU Datathon Website UI components and social posts
- Helped coordinate one of the largest Major League Hacking Data Science Hackathons with 600+ participants

Student Teaching Assistant Aug. 2020 - Present
- Held weekly lab for 120+ students enrolled in Intro to Python to explain the coding principles and program design
- Communicated with professors on students' feedback and class performance, and assisted in grading assignments