Raziq Raif Ramli

https://raziqraif.com | https://github.com/raziqraif | mramli@purdue.edu | (765) 430-6039

Education

Purdue University, West Lafayette, IN *CGPA: 3.72*

Bachelor of Science in Computer Science Honors *May 2022*

- **Tracks:** Systems Software, Software Engineering, Machine Intelligence
- **Minor:** Mathematics
- **Scholarship:** PETRONAS Education Sponsorship Program ($180,000)
- **Relevant Coursework:** Parallel Computing, Operating Systems, Computer Networks, Compilers, Relational Database, Software Engineering, Software Testing, Cryptography, Artificial Intelligence, Data Mining & Machine Learning, Numerical Linear Algebra, Algorithms Analysis, Theory of Computation, Virtual Reality Technology

Experience

Reliable and Secure Systems Lab, Purdue University, IN

Undergraduate Researcher - C++, SVF *Jan 2021 - Current*

- Building pointer analysis platform for Linux kernel using SVF framework.

Rosen Center For Advanced Computing, Purdue University, IN

Software Intern - Python, Pandas, Github Action, Selenium, Pytest, Figma, CSS, Ipywidgets *May 2021 - Aug 2021*

- Designed data pipeline to automate AgMIP researchers' data warehouse construction (DOI: 10.21981/K556-QF77).
- Implemented DDD-oriented layered architecture, allowing support for flexible data protocols.
- Devised method for uploading large files through ipywidgets applications, resolving existing file size restriction of 10MB.
- Programmed process for validating, diagnosing, harmonizing, visualizing, and monitoring ingested data.

Software Intern - Python, SQLite, GDAL, Ipyleaflet, Ipymaterialui *May 2020 - Aug 2020*

- Rebuilt geospatial visualization and analysis software to expand its visualization capabilities.
- Implemented algorithm to process and visualize GeoTIFF data by using GDAL and Ipyleaflet.
- Developed simultaneous visualization feature, allowing for ease of data analysis.

Environmental & Ecological Engineering Department, Purdue University, IN

Software Developer, Volunteer - Python, Tkinter, Pygubu *May 2020 - Aug 2020*

- Conducted regular consultations to onboard new software developer into the team.

Software Developer, Part-time - Python, Tkinter, Pygubu *Jul 2019 - May 2020*

- Developed Python applications to perform techno-economic analysis (TEA) for Critical Materials Institute's projects.
- Re-engineered legacy codebase within first 2 weeks of work, enhancing 4 user-facing functionalities.
- Pioneered use of rapid application development (RAD) tool in project workflow, reducing UI development time.
- Designed mechanisms for reporting preliminary TEA, dynamic TEA, mass flow estimates, and energy costs estimates.

Projects

Zero-Knowledge Comparator - Python, socket, PyNaCl *2021*

- Implemented secure file comparator by using Socialist Millionaire Protocol and Ed25519 digital signature system.
- Endorsed by 2/2 assigned red teams for protocol design.

PurdueParty.io - *ReactJS, Typescript, Redux, Firebase, CSS, Material UI* *2021*

- Built one-stop app that offers features pertaining to forums, events, clubs, and facilities at Purdue.
- Delivered 10 user stories within 3 sprints.

Fortune - *ReactJS, Flask, Typescript, Python, Redux, PostgreSQL, CSS* *2020*

- Built web-based cryptocurrency trading game that operates on real-time cryptocurrency data.
- Collaborated in an agile software development cycle with a team of 6 developers.

Skills

Technology/Framework: ReactJS, Flask, GitHub Action, Linux, Firebase, PostgreSQL, SQLite, Postman, Pytest, Selenium, Unity, JUnit
Programming Language: Python, C, Typescript, Java, C++, Julia, C#, Arduino