David Liu

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Experience

Horticulture Fluorescent Sensor Project, Lighting Enabled Systems & Applications   **May - December 2022**
Data Engineer
- Designed a scalable Bluetooth client-server network to facilitate data flow between microcontrollers
- Built and maintained a data processing pipeline using Micropython and PostgreSQL databases
- Sandboxed and configured microcontroller networks through the Bash command line
- Presented weekly stand-ups and self-directed a software development schedule

Undergraduate Research, Rensselaer Polytechnic Institute   **January - April 2022**
Researcher
- Optimized random graph generation algorithms for large real-world networks with >20k nodes
- Designed infrastructure for data processing, analysis and visualization using NumPy and matplotlib
- Performed experiments on a remote high-performance GPU server via SSH
- Co-authored a paper with a professor and graduate student

Pipeline (*in-house publishing app for RPI journalists*), Rensselaer Center for Open Source (RCOS)   **Fall 2021**
Open Source Developer
- Consulted with clients to determine active pain points in UI/UX
- Designed and merged QoL improvements via Github
- Worked in PostgreSQL, Django, and Wagtail

YACS (*Yet Another Course Scheduler*), Rensselaer Center for Open Source (RCOS)   **Summer 2021**
Open Source Developer
- Performed web-scraping via Beautiful Soup to generate and display professor emails on the frontend
- Worked in Javascript, SQL, Vue, and Docker

Skills

Aptitudes: data analysis, software engineering, data visualization, shell scripting
Languages: Python, SQL, C++, C, HTML/CSS
Proficiencies: Git, Unix/Linux, NumPy, matplotlib, LaTeX

Education

Rensselaer Polytechnic Institute (RPI), Troy, NY   Cumulative GPA: 3.73 / 4.00
Bachelor of Science in Computer Science   **December 2022**

Research

Correcting Output Degree Sequences in Chung-Lu Random Graph Generation   **2022**
Christopher Brissette, David Liu, and George M. Slota
In the Proceedings of The 11th International Conference on Complex Networks and Their Applications

Extracurriculars

The Polytechnic, Rensselaer Polytechnic Institute   **Fall 2021 - Fall 2022**
Managing Editor
- Managed the editorial process for articles, enforcing journalistic consistency and integrity
- Wrote news articles and op-eds for RPI's only student-run news organization
- Represented RPI at the 2022 College Media Association convention in New York City