William Lin

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EDUCATION

Rensselaer Polytechnic Institute   Aug 2021 – May 2025
B.S. Computer Science (GPA: 3.60/4.00)   *Troy, NY*
- Awards: Rensselaer Leadership Award, Rensselaer Academic Recognition, Joseph G. Abuelo Scholarship
- Courses: Data Structures, Computer Architecture, Software Engineering, Algorithms, Operating Systems

EXPERIENCE

Data Engineer Intern   Sep 2023 – Present
United States Department of Agriculture   *Remote*
- Collaborated to implement a dashboard using **Tableau** Web Data Connector SDK, utilizing RESTful web service to fetch and display pollination data metrics, delivering insights to 400,000+ monthly users and stakeholders
- Championed automation of 1,500+ USDA data products through Python scripts, reducing update times by 60%
- Identified and rectified 30+ broken or outdated links on USDA.gov by using Python library **BeautifulSoup**

Software Engineer Intern   Aug 2023 – Present
National Aeronautics and Space Administration   *Houston, TX*
- Assisted in the agile design of next generation cloud infrastructure via **GitLab**, transitioning from **GCP** utilizing GCS, GKE, PostgreSQL to a **Kubernetes** multi-cloud implementation incorporating **AWS** (EKS, S3, VPC)
- Collaborated to integrate **KeyCloak** for identity auth, **Harbor** for storage, and **Terraform** for infrastructure as code to prototype zero trust principles and identity federation, reducing unauthorized accesses by 90% past month
- Spearheaded toDo feature using **Go** Fiber for the API backend, **Protobuf** for the Schema, and **PostgreSQL** for the database alongside **Kafka** to establish a standardized task assignment system for the 50+ partner institutions
- Implemented **CI/CD** pipelines via **Gitlab** to automate **Docker** container and achieve zero downtime deployments

Technical Lead   May 2023 – Aug 2023
Rensselaer Center for Open Source   *Troy, NY*
- Led development of MazeAI alongside team of 4 devs under the supervision of Rensselaer Center of Open Source
- Implemented Monte Carlos in **OpenAI Gym**, Deep-Q Neural Networks via **PyTorch**, and A* using **NumPy**
- Established reward system to optimize agent's decision making ability by fine tuning hyperparameters, leveraging discount factors, and incorporating experience replay to boost navigation efficiency by 2000% from initial model

CS & Math Tutor   May 2023 – Aug 2023
Volunteer   *Troy, NY*
- Supervised 1-1 tutoring sessions to 3 students, covering subjects such as Data Structures, Calculus and American History; students reported an average grade increase of 20% with one gaining admission to Yale University

Software Developer   May 2023 – Aug 2023
Rensselaer Polytechnic Institute   *Troy, NY*
- Developed filters for RPI courses based on time, department and pre-reqs complemented with display of major specific graduation requirements using **Vue.js** frontend, Python **FastAPI** backend and **Docker** deployment
- Scaled platform to garner widespread usage among the 5,800 students with a 30% increase in users

PROJECTS

BeyondThePage | *React, Javascript, MongoDB, Node.js, Express.js, Material-UI, MapBox API, Git*   Sep 2023
- Full-stack application that allows users to review geographical locations; leveraged **React** frontend, **MongoDB** to store reviews, and **Node.js** with **Express** backend; integrated **MapBox** for live location and global map

Wordle | *C, POSIX Threads, TCP/IP/ Git*   Aug 2023
- Built **multi-threaded TCP** server to host Wordle, supporting up to 20 simultaneous clients with minimal latency

Survival | *Python, Tensorflow, Numpy, Pandas, Matplotlib, Git*   Apr 2023
- Supervised learning model that predicts the likelihood of survival for passengers on Titanic using linear regression

TECHNICAL SKILLS

Languages: Python, C/C++, PostgreSQL, Java, Go, JavaScript, Typescript, HTML/CSS, R, React, Node.js, Angular
Tools: Git, Docker, Kubernetes, Terraform, Kafka, AWS(EC2, DynamoDB, Lambda, EKS, S3), GCP(VPC, GKE, GCS)