Adam Zawierucha

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WORK EXPERIENCE

Amazon

Software Development Engineer Intern — Amazon Web Services (EC2) May - July 2022

- Wrote integration tests using **Java** in a Continuous Integration/Deployment (CI/CD) pipeline
- Wrote infrastructure as code in **Ruby** in order to auto deploy and update operation scripts written in **Bash**

Software Development Engineer Intern — Amazon Freight May - August 2021

- Developed **full-stack** web applications using **TypeScript**, **Next.js**, & **React**
- Created design documents, debugged pre-existing errors, met with end-users, and presented to teams of engineers

MD Anderson Cancer Center

Software Developer (Data Entry Operator) January - May 2021

- Developed a dashboard using **C#**, **JavaScript**, **SQL**, **Express**, and **React** for a diagnostic radiotherapy AI system

EDUCATION

Rice University Graduating in May 2023

Bachelor's Degree — Computer Science & Mathematics GPA 3.87/4.00

- Jackie Schnell Memorial Scholarship Recipient, Brown College Academic Fellow, President's Honor Roll
- Featured by Rice Engineering: *https://tinyurl.com/rice-article-adam*

SELECTED ACADEMIC & EXTRACURRICULAR EXPERIENCE

RiceApps (Software Development Club)

President September 2019 - Present

- Built a web app for Rice Career Center that increases externship matches by 5% and reduced process time by days
- Built a **React** website that matches veterans with bee-keeping mentors (Hives for Heroes)
- Co-developed *Rice Public Art*, a **React Native** mobile app for The Moody Center for the Arts
- Managed a summer web development program that had over 30 participants

Rice Computer Science Department

Head Teaching Assistant — Data Structures & Algorithms January 2021 – May 2023

- Conduct office hours, facilitate labs, create solution keys for homework sets, grade exams and homework

Research Assistant — Formal Methods January – May 2022

- Researching theoretical limitations regarding regular expressions, specifically bounded counters
- Utilized **Rust** and **Java** to implement and test features for a regular expression matching engine

Research Assistant — Bioinformatics May – December 2020

- Applied **deep learning** techniques to resolve molecular phylogenetic quartets
- Utilized **Python** and **PyTorch** to train machine learning models on simulated genetic sequences

SELECTED PROJECTS

Hierarchical Bloom Filters *(github.com/zawie/hierarchical-bloomfilters)* December 2022

- Designed a page-fault resilient bloom filter which has better performance without increasing false positive
- Experimentally demonstrated the claim by implementing the data structure in **C** and writing test scripts in **Bash**

O-Week Genealogy *(www.oweek.org)* November 2022

- Built a **Next.js** web app that displays an advisor-advisee “family” tree contains over 2,800 students and alumni

Encryptor *(github.com/zawie/cryptography)* July 2022

- Built an encryption algorithm using feistel ciphers and the counter mode of operation using **Rust**

Operating System June 2022

- Built an operating system kernel and file system for simulated hard for an upper-level systems course using **C**

uresume *(www.uresu.me)* July 2021

- Built a **full-stack** (**MongoDB**, **Express**, **React**, **Node**) resume site for creating online resumes

Divorce Data Science (*divorce.zawie.io*) January 2020

- Used Support Vector Machines and Feature Elimination to rank questions that predict divorce
- Won “Best Underclassmen Team” at Rice University Datathon 2020

SKILLS: Python, Java, C, Rust, Lua, JavaScript, TypeScript, Ruby, Bash, React, Next.js, Express, Amazon Web Services (AWS), Web Development, Full Stack Development, Agile Methodologies, CI/CD, git, Leadership, Communication