ISAAC LEE

Employment

Microsoft
Redmond, WA
Software Engineer, Artifact Services
Nov. 2019 to Current

The Artifact Services team works on the toolchain supporting the development of the Windows operating system. Specifically, we manage services for storing artifacts, packages, and metadata from Windows builds. I spend most of my time:

- Writing high-quality, testable, and efficient code to add new features and improve reliability for our services
- Fixing bugs, investigating livesite incidents, and driving processes that support a DevOps culture

Atlanta Braves
Atlanta, GA
Intern, Research & Development
June 2019 to Nov. 2019

- Developed new tools and visualizations for the Braves' proprietary baseball analytics platform
- Created player plans for 30+ minor league prospects using advanced statistics, scouting reports, and feedback from player development staff
- Identified potential trade targets and minor league free agents; presented reports to assistant general managers and other employees in baseball operations

Microsoft
Redmond, WA
Software Engineering Intern, Artifact Services
June 2018 to Sept. 2018

- Updated an on-prem service for storing symbols from Windows builds to take advantage of cloud technologies
- Prepared design documents and threat models to verify updated service optimized cost, reliability, and security

Northwestern University
Evanston, IL
Teaching Assistant
Sept. 2017 to Dec. 2017

- Graded problem sets, held office hours, and led discussion sections for upperclassmen and graduate students taking Design & Analysis of Algorithms
- Course curriculum included dynamic programming, reductions, computational complexity theory, greedy algorithms, and approximation algorithms

Rise Science
Chicago, IL
Software Engineering Intern
June 2017 to Apr. 2018

Rise Science is a sleep science and coaching startup that works with sports organizations such as the Chicago Bulls and Alabama Football. My focus was improving a data dashboard for sleep coaches.

- Designed and developed a new navigation system using **AngularJS** and **Algolia**
- Added new endpoints to an API, enabling sleep coaches to view new metrics

Projects

Baseball/Sports Data Projects

Over the past couple of years, I have built small side projects combining my interest in sports with public data to learn new skills. Some examples are:

- A REST API for pitch-by-pitch data from Statcast, backed by a database automatically populated from Baseball Savant, built with **Azure**, **FastAPI**, and **MySQL**
- Data visualizations of Statcast data, built with **D3**, **Observable**, and **Plotly**
- A model forecasting the outcomes of possible matchups in the NCAA basketball tournament for a cancelled Kaggle competition, built with **scikit-learn** and **fastai**
- A web scraper that parses play-by-play data from the Northwestern Baseball website into a database, built with **Scrapy** and **Firebase**

Rust Event Parser
June 2019

- Developed a **Rust** "crate" (package) with libraries to parse natural language into iCalendar events
- Wrote full documentation and deployed the crate to the crates.io Rust package registry

Survivor Voting Model
June 2018

- Developed an agent-based model to simulate voting alliances in the Survivor reality competition
- Built using **NetLogo**, an agent-based programming language and integrated modeling environment

Activities

Institute of Electrical and Electronics Engineers
Jan. 2016 to June 2019

- Managed teams in the IE3 Technical Program; led brainstorming and hacking sessions to help students design and build a side project
- Organized BadHacks, an 8-hour hackathon with 40+ attendees that encouraged novice developers to learn new skills by creating a silly project
- Organized Project Showcase, a project fair with 20+ student teams for students to present independent side projects to peers and industry judges

Additional Activities: Northwestern Club Baseball

Contact

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Education

Northwestern University
Sept. 2015 to June 2019

B.S. Computer Science 2019
Cum Laude
Cumulative GPA: 3.76/4.00
Relevant Coursework: Data Visualization, Spatial Computing, Rust Programming, Statistical Machine Learning, Programming Languages, Agent-Based Modeling, Distributed Systems, Networking, Operating Systems, Algorithms

Skills

LANGUAGES & FRAMEWORKS
Python (Flask, Pandas)
C# (.NET)
Javascript (D3, Vue)
HTML/CSS
SQL (Microsoft SQL Server, MySQL)