Parker Hyde

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Education

Georgia State University, *Atlanta, Georgia* **Fall 2018 — May 2023**
B.S Mathematics, *Minor in Computer Science* **GPA:** *3.86*

Skills

Programming Languages:	c/c++, Java, Python, Golang, Rust, Javascript/TypeScript, Haskell, SQL, RISC-V assembly, HTML
Technologies:	Node, Express, React, Flask, Pytorch, numpy, AWS, GraphQL, MongoDB, PostgreSQL, SCSS, Tailwind
Tools:	Git, Bash, Docker, Kubernetes, JIRA, Postman, npm, pip, Maven, Make, GDB, linux
Experiences:	Fullstack, REST API, Cloud, Authentication, Distributed Systems, TDD, Shell Scripting

Experience

Senior Research (Team) Project **JAN 2022 — MAY 2022**
Georgia State University *Atlanta, GA*

- Developed deep learning algorithms that recover differential equations from simulated physcial systems.
- Reproduced existing results from the "Sparse Identification of Nonlinear Dynamics (SINDy)" research paper by Brunton et al.
- Independently developed data generation, visualization, and debugging tools to support algorithm develpment team and automate repetitive tasks.
- Implemented custom PyTorch Autoencoder to recover equations from transformed data and high dimensional embeddings.
- Leveraged Agile methodologies and Trello for project management to effectively meet deadlines and enhance team collaboration.

Software Engineering Intern **SEPT 2019 — JAN 2020**
IDLogiq *Santa Clara, Ca (Remote)*

- Participated in technical discussions focusing on system design and application architecture.
- Engaged with a diverse tech stack including Node, React, Typescript, Docker, Kubernetes, MongoDB, Meteor JS, and Cordova.
- Discussed system design tradeoffs such as Publish/Subscribe architecture and web socket technology.
- Assisted marketing team in designing promotional materials using Adobe Illustrator and Figma.

Tutor - CS, Math, Physics **JAN 2019 — DEC 2019**
Self-employed *Alpharetta, GA*

- Tutored students in Computer Science, Math (up to differential equations) and Physics
- Guided students to achieve their goals and enhance understanding of introductory programming, data structures, and Object-Oriented Programming (OOP) concepts.

Projects

Modulo - Productivity App | C **JULY 2023**

- Developed a terminal application allowing users to log end-of-day thoughts and review them the next morning.
- Designed a robust time-slicing algorithm to sync application state with the users sleep schedule.
- Created an interactive text-user-interface (TUI) editor using the ncurses library and an event-driven MVC architecture.
- Used the cJSON library to serialize/deserialize user data to disk.

P2P File Tracker - Distributed File System | Python **APRIL 2023**

- Developed a Peer-to-Peer (P2P) file tracker system for distributing and tracking file chunks across a network of peers.
- Implemented client-side logic for checking in local chunks to the tracker and requesting missing chunks from other peers.
- Engineered tracker-side logic to maintain a list of chunks and their locations, and respond to chunk location queries from clients.
- Enabled customizable client setup with command-line arguments for directory usage, P2P transfer port, and client name.

Minimax Tic-Tac-Toe | React, TypeScript **AUGUST 2021**

- Created an engaging Tic-Tac-Toe game using TypeScript, React, and CSS Flexbox.
- Integrated an AI opponent utilizing the recursive Minimax algorithm ensuring that AI makes optimal moves.
- Leveraged TypeScript's strong typing features to enhance the robustness of the application, significantly reducing potential bugs and ensuring code reliability.
- Successfully deployed this application using the Netlify platform.