Andy Xiao

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Education

University of Pennsylvania — School of Engineering & Applied Science   Philadelphia, PA
Bachelor of Applied Science (BAS) in **Computer Science**   December 2022
o <u>Minor</u>: Statistics [Wharton]   3.83/4.00
o <u>Coursework</u>: Internet & Distributed Web Systems, Networked Systems, Machine Learning, Algorithms, Databases, Advanced Functional Programming, Big Data Analytics, Software Engineering, Computer Graphics, Computer Architecture, Probability, Statistical Inference, Time Series Analysis, Bayesian Statistics

Professional Experience

Hudson River Trading, *Incoming Algorithm Engineer Intern*, New York, NY   Summer 2022
Tesla, *Software Engineer Intern*, Palo Alto, CA   August 2021 – Present
o Energy Device Software Team
o Go, TypeScript, React
Akuna Capital, *Quantitative Developer Intern*, Chicago, IL   June 2021 – August 2021
o Analyzed the impact of news on equity markets and used results for predictive modeling
o Implemented a new exchange latency dataset generator to better understand the order lifecycle
LinkedIn, *UI Engineer Intern*, Sunnyvale, CA   May 2020 – August 2020
o Led the frontend implementation of a new insight card feature on LinkedIn's Sales Navigator homepage with Ember.js
o Aimed to drive deeper user engagement on the homepage by providing insightful and actionable information to the user
CIS 197 (JavaScript), *Teaching Assistant*, Philadelphia, PA (*seas.upenn.edu/~cis197*)   August 2020 – May 2021
o Student taught mini-course focused on teaching modern JavaScript; Covered Node.js, Express, React, Redux, and MongoDB
o Hosted weekly office hours, developed and refactored homeworks, and graded JavaScript programming assignments
CIS 502 (Analysis of Algorithms), *Teaching Assistant*, Philadelphia, PA   January 2020 – May 2020
o Graduate level algorithms course of 120 students; hosted weekly office hours; graded homeworks and exams
o Covered greedy algorithms, dynamic programming, graph traversals, max flow, NP-completeness, and approx. algorithms
Multifamily Asset Managers, *Software Engineer Intern*, Bethesda, MD   May 2019 – August 2019
o Architected multiple property management pages along with a CRUD REST API in React and .NET
o Created an advanced form builder component in React, greatly increasing development speed and maintainability
University of Pennsylvania, *Web Developer*, Philadelphia, PA (*pathways.history.upenn.edu*)   April 2019 – November 2019
o Developed and designed an interactive course selection web app called "Pathways" for Penn's History Department
o Worked with another developer to build out functionality, including a Pinterest style layout and a course visualization network

Projects

Mini Google (Java, AWS, Scala) | (*github.com/andyxiao1/mini-google*)
o Architected and implemented a search engine based on Google's architecture circa 1997
o Led the development of the web crawler component, indexing over a million web pages on 8 EC2 instances at over 20 pages per second
TCP Chat Server (Haskell, Brick) | (*github.com/andyxiao1/tcp-chat-server*)
o Slack-like chat server with rooms and threads built from the socket level using concurrent threads in Haskell
o Utilized the STM monad with transactional channels and variables to share data and communicate across server threads
o Abstracted pure functions away from IO to effectively test and created a client-side terminal UI with Brick
Shared Paper (React Native, Node.js, Socket.io, MongoDB) | (*github.com/andyxiao1/shared-paper*)
o Shared Paper is a note taking app developed at Bitcamp 2019 which allows multiple users to take notes together in real time
o Architected entire React Native mobile app with full featured drawing canvas, user sign-up/login, and document sharing
o Spearheaded group of 4 developers to integrate mobile app with backend, using Socket.io for real time updates

Skills

o **Languages**: Python, TypeScript/JavaScript, Go, Java, C++, Haskell, R, C#, HTML/CSS
o **Technologies**: Pandas, React, Ember.js, Node.js, .NET, Spark, MongoDB, SQL, Git