

# Andy Xiao

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## Education

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**University of Pennsylvania** — School of Engineering & Applied Science Philadelphia, PA  
**Bachelor of Science in Engineering (BSE) in Computer Science** May 2022  
3.79/4.00  
○ Minors: Statistics [Wharton] & Engineering Entrepreneurship  
○ Coursework: 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

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**Akuna Capital**, *Incoming Quantitative Development Intern*, Chicago, IL Summer 2021  
○ Market Microstructure Team  
**LinkedIn**, *UI Engineer Intern*, Sunnyvale, CA May 2020 – August 2020  
○ Led the frontend implementation of a new insight card feature on LinkedIn's Sales Navigator homepage  
○ Aimed to drive deeper user engagement on the homepage by providing insightful and actionable information to the user  
○ Ember.js, JavaScript  
**CIS 197 (JavaScript)**, *Teaching Assistant*, Philadelphia, PA ([seas.upenn.edu/~cis197](https://seas.upenn.edu/~cis197)) August 2020 – Present  
○ Student taught mini-course focused on teaching modern JavaScript; Covers Node.js, Express, React, Redux, MongoDB, and server-side rendering  
○ Host weekly office hours, develop and refactor homeworks, and grade JavaScript programming assignments  
**CIS 502 (Analysis of Algorithms)**, *Teaching Assistant*, Philadelphia, PA January 2020 – May 2020  
○ Graduate level algorithms course of 120 students; covers greedy algorithms, dynamic programming, graph traversals, max flow, NP-completeness, and approximation algorithms  
○ Hosted weekly office hours; graded homeworks and exams  
**Multifamily Asset Managers**, *Software Engineer Intern*, Bethesda, MD May 2019 – August 2019  
○ Architected multiple property management pages along with a CRUD REST API in React and .NET  
○ Created an advanced form builder component in React, greatly increasing development speed and maintainability  
○ Converted pages from jQuery to React and refactored backend to fetch data more efficiently, decreasing load times by half  
○ React, JavaScript, .NET, C#, MSSQL  
**University of Pennsylvania**, *Web Developer*, Philadelphia, PA ([pathways.history.upenn.edu](https://pathways.history.upenn.edu)) April 2019 – January 2020  
○ Developed and designed an interactive course selection web app called "Pathways" for Penn's History Department  
○ Worked with another developer to build out full functionality, including a Pinterest style layout, animations, a course visualization network, and site walkthrough capabilities  
○ React, Redux, JavaScript

## Projects

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**TCP Chat Server** (Haskell, Brick) | ([github.com/andyxiao1/tcp-chat-server](https://github.com/andyxiao1/tcp-chat-server))  
○ Slack-like chat server with rooms and threads built from the socket level using concurrent threads in Haskell  
○ Utilized the STM monad with transactional channels and variables to share data and communicate across server threads  
○ 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](https://github.com/andyxiao1/shared-paper))  
○ Shared Paper is a note taking app developed at Bitcamp 2019 which allows multiple users to take notes together in real time  
○ Architected entire React Native mobile app with full featured drawing canvas, user sign-up/login, and document sharing  
○ Spearheaded group of 4 developers to integrate mobile app with backend, using Socket.io for real time updates  
**Penn Course Scheduler** (React, Node.js, Express) | ([github.com/andyxiao1/penn-course-scheduler](https://github.com/andyxiao1/penn-course-scheduler))  
○ Penn Course Scheduler is web app that allows Penn students to see all possible schedules for the courses they want to take  
○ Implemented an API to perform a DFS traversal and return all valid schedules and created a UI to search and show schedules

## Skills

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