

# BRADY ZHOU

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## EDUCATION

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**University of Pennsylvania**

**Philadelphia, PA**

*Candidate for Bachelor of Science in Engineering in Computer Science (Cumulative GPA: 3.93/4.00)*

*May 2025*

## TECHNICAL SKILLS

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**Languages:** Python, Java, C, , C++, HTML/CSS, JavaScript, Typescript, SQL, Haskell

**Developer Tools:** QT Creator, Visual Studio Code, Unity, Google Colab, PowerBI, Power Automate, Microsoft Excel

**Technologies/Frameworks:** Linux, React, Git, Redux Toolkit, Express.js, Pandas

## RELEVANT COURSEWORK

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- Data Structures and Algorithms
- Big Data Analytics
- Mathematical Foundations of Computer Science
- AI/ML
- Operating Systems
- Databases and Information Systems
- JavaScript Programming
- Networks and Security
- Software Engineering
- Interactive Computer Graphics
- Python Programming

## EXPERIENCE

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**University of Pennsylvania**

**Philadelphia, PA**

*Teaching Assistant*

*Jan 2024 – Present*

- Answer 10-20 student questions on the discussion board weekly
- Hold 2 hours of weekly office hours to guide students through assignments
- Assist with grading and provide constructive feedback to over 60 students

**MetLife**

**Whippany, NJ**

*Software Engineering Intern*

*June 2024 – Aug 2024*

- Built a proof of concept (POC) for an AI application to query business PDFs, optimizing speed by 20% and improving accuracy by 30% using retrieval augmented generation techniques and different scoring mechanisms
- Augmented an existing PowerBI report by defining 10 additional columns and 2 new tables to calculate file delays based on past data and automated email alerts via Power Automate to notify the support team of significant delays

**Steppingstone Scholars**

**Philadelphia, PA**

*Blended Learning Initiative (BLI) Instructor*

*June 2022 – Aug 2022*

- Instructed Java to a classroom of 20 high school students. Facilitated lessons and activities, increasing student engagement by 25%
- Guided students through their final projects, which consisted of games and animations

## PROJECTS

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**Collow** | *SQL, JavaScript, Express.js, React, Pandas*

- Collaborated in a team of 4 to develop a full-stack web application using JavaScript, SQL, Express.js, and React, allowing users to find their ideal U.S. county based on various metrics
- Used Python pandas to clean and analyze two datasets with over 200, 000 rows total. Designed and managed a relational database over cleaned data
- Optimized query performance by 10% using structured queries and indices

**Fly History** | *TypeScript, HTML, CSS*

- Designed a browser extension that enables users to easily access and review past flight inquiries on Google Flights utilizing TypeScript and collaborating with frontend and backend engineers
- Led backend debugging efforts, identifying root causes of issues, testing hypotheses, implementing solutions, and retesting for accuracy. Reduced failures by 75% achieving target minimum viable product [MVP] for product launch

**Duck Domination** | *C#, Unity*

- Developed a top-down action-roguelite game using C# and Unity
- Improved enemy AI model through 5-10 iterative refinements, enhancing the player's experience
- object-oriented programming (OOP) principles to create maintainable, modular code, optimizing development efficiency

## INTERESTS

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Game Development, AI, Software Development, Volleyball, Running, Weight Lifting