# David Zhan

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#### **EDUCATION**

## University of Pennsylvania, Philadelphia, PA

May 2026

BSE in Computer Science (AI Concentration), MSE in Computer Science

GPA: 4.0/4.0

- Coursework: Data Structures and Algorithms, Data Systems\*, Operating Systems\*, Machine Learning/AI\*, Data Analysis\*, Natural Language Processing\*, Computer Vision\* \*Graduate
- **Involvements:** Penn Aerial Robotics (Software Lead), Machine Learning Research @ Penn, Penn Club Soccer (Captain), Penn Club Badminton (Captain), Penn Flux (VP of Finance)
- Minors: Math. Data Science

#### **EXPERIENCE**

### **Software Engineering Intern** | *Ventoscity LLC*

College Park, MD | June – August 2024

- Redesigned a full-stack, cross-platform mobile app using Flutter, achieving 20% faster load times and reducing app size by 30% for improved user experience on both iOS and Android.
- Integrated AI-powered food scanning and analysis, accurately assessing portion sizes and fiber content with 90% accuracy across 100+ common foods.
- Conducted extensive user testing with 50+ external participants, implementing over 25 usability improvements based on feedback, resulting in a 40% increase in user satisfaction scores and 15% reduction in crash rates.

## Frontend Software Engineer | keep.id

Philadelphia, PA | March – May 2024

- Complete redesign of main landing page, leading to a 60% reduction in user-reported issues and significantly improving the backend document management process.
- Developed responsive UI framework, optimizing interface layouts across various screen sizes.

# Research Intern | National Research Foundation

College Park, MD | June - August 2023

- Developed a Swift-based mobile app designed to integrate with an emerging gut health start-up at UMD.
- The app demonstration was pivotal in securing over \$1 million in VC funding over the next 3 months

## **Mobile Developer** | *The Daily Pennsylvanian*

Philadelphia, PA | January - Dec 2023

- Implemented interstitial ads using React Native and Google AdMob to monetize app loading screens
- Boosted DP+ mobile app revenue by **over 20%** during the ad campaign.

#### **PROJECTS**

### Blip / Next.js, TypeScript, Tailwind, Clerk, Convex

September 2024

- Short form audio platform which encourages micro-learning during transition times
- Leveraged Cerebras and OpenAI API to aid user content generation
- PennApps XXV: Best Entertainment Hack

### **Ngram POS Tagger** | *Python, scikit-learn, pytorch*

October 2024

- Hidden Markov Model-based POS tagger implementation
- Incorporated Greedy, Beam Search, and Viterbi inference methods
- Trained on Penn Treebank from WSJ; achieved 96.2% accuracy on randomized test set

# **DavidDocs** | Next.js, TypeScript, Tailwind, liveblocks

June 2024

- Real time collaboration system designed to streamline team productivity and document management
- Implemented live commenting and integrated push notifications, increasing user interaction by over 50%.

#### **AWARDS**

• **PennApps XXV**: Best Entertainment Hack

2024

• **AIME** Invitee (4 times)

2018-2022

National Merit Scholar

2021

## **SKILLS**

**Languages**: Python, Java, SQL, C / C++, Swift, Dart, JavaScript, Kotlin

Frameworks: React, Node.js, Next.js, TailwindCSS, TypeScript, Three.js, Bootstrap, Flutter, Django,

Tools: pandas, NumPy, Matplotlib, scikit-learn, TensorFlow, PyTorch, OpenCV,