

# Zi Jun Wang

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## EDUCATION

### University of Illinois Urbana-Champaign

Bachelor of Science in Mathematics & Computer Science; GPA: 3.8

Champaign, IL

Expected: May 2027

## TECHNICAL SKILLS

**Languages:** Python, Java, C++, JavaScript, TypeScript, HTML/CSS

**Frameworks & Libraries:** React, Next.js, Astro, Node.js, Tailwind CSS, Framer Motion, NumPy, Pandas, Pillow

**Developer Tools:** Git, GitHub, VSCode, Docker, Azure DevOps, Firebase, Supabase, Vercel, Figma, Pocketbase

## EXPERIENCE

### Humana

May 2025 – Present

Software Engineer Intern - NLP Data Science Team

Louisville, KY

- Analyzed OCR accuracy using precision, recall, and WER to validate ADI model performance on PHI docs.
- Synthesized over **10,000+** synthetic OCR output images using PILLOW with corresponding bounding boxes and CSV annotation files for model training and validation workflows.
- Orchestrated Shearwater campaign on 3,800+ handwritten samples, achieving **90%+** inter-annotator agreement.
- Contrasted ADI vs. Tesseract OCR in downstream pipelines, identifying **18%+** gains in structured data accuracy.
- Examined prod and staging environments using difflib and rigorous mathematical algorithms to determine scale, offset, and linear/exponential patterns for filtering data inconsistencies and validating model performance.

### University of Illinois Urbana-Champaign

August 2024 – May 2025

HCI Research Assistant - Social Space Lab

Champaign, IL

- Engineered prototype syllabus analysis tool using Gemini API, enhancing content accessibility for diverse learners.
- Consolidated findings from **20+** research papers to recommend inclusive education technology solutions.
- Spearheaded AI-driven solutions to improve educational inclusivity for students with disabilities.
- Constructed a Python-based web scraper utilizing Google Sheets API to collect/analyze data from **800+** faculty profiles, enhancing research dataset comprehensiveness.

### MarketMinks LLC

August 2024 – January 2025

Software Engineer Intern - Web Dev Team

Remote

- Structured responsive websites using NextJS & Tailwind, boosting user engagement and client online presence.
- Executed SEO strategies and Google Analytics, raising organic traffic and search visibility.
- Optimized WordPress themes and plugins to meet client business goals, reducing deployment time.

## PROJECTS

### CarGo | Expo, React Native, Supabase, Postgresql, Google Cloud AI

June 2025 – Present

- Developed cross-platform mobile app using Expo and React Native for intuitive user interface design.
- Established backend infrastructure with Supabase and PostgreSQL for real-time data management.
- Incorporated Google Gemini API for automated image analysis and computer vision processing.
- Formulated advanced SQL queries and database filtering for efficient data retrieval and search functionality.

### Rankguesser (Acquired by ValoHunt) | Next.js, Firebase, Python, DiscordAPI

December 2024 – July 2025

- Launched a web app using Next.js and TailwindCSS, achieving over **30,000** impressions and **500** registered users.
- Implemented effective SEO strategies with Google Search Console, resulting in an average index of **2-6**.
- Embedded DiscordAPI to streamline feedback processes and user video submission, reducing processing time.
- Streamlined Python implementation for video data management, improving content delivery speed.

### NextGen Converter | TypeScript, Auth.js, Firebase, FFmpeg, GeminiAPI

August 2024 – September 2024

- Delivered client-side conversion using FFmpeg compiled to WebAssembly, reducing server-side load.
- Configured Google's Gemini API to create a code converter for translating code files between languages.
- Leveraged Auth.js for Google authentication and Firebase for real-time user data storage, enabling file size tracking and a competitive leaderboard.