

Steven Kiss

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EDUCATION

Purdue University GPA: 3.88/4.0

BS in Computer Science, Concentration in Machine Learning; Minor in Mathematics

West Lafayette, IN

Aug. 2023 – May. 2026

PROJECTS

Chinese Language Practice App | *React Native, Firebase, Flask, Python, TypeScript*

Dec. 2024 – present

- Built a full-stack mobile app supporting **custom flashcard decks**, **progress tracking**, and Firebase-backed authentication, tailored for Chinese learners at Purdue.
- Developed a Flask backend for parsing DOCX files with **regex-powered vocabulary extraction**, enabling seamless auto-generation of structured flashcard sets from course materials.
- Integrated a Hanzi-writing module using HanziWriter to deliver **stroke-by-stroke character practice**, complete with real-time feedback, adjustable styling, and auto-checking logic.
- Implemented gesture-based interactions like **card flipping**, **swipe-to-sort**, shuffle/undo functionality using React Native's Animated API and Swiper Library for an intuitive study experience.

DoodleVault – Drawing Dataset Creator | *React, Firebase, Firestore, HTML Canvas*

Apr. 2025 – present

- Engineered a full-stack web app enabling users to create and manage drawing-based datasets for machine learning, supporting over **5+ customizable datasets per user** with live configuration syncing via Firestore.
- Designed a responsive canvas tool that captures user drawings, automatically resizes inputs to **GPU-optimized resolutions (e.g., 28x28)**, and stores both base64 and normalized grayscale pixel arrays for ML-ready export.
- Built a public contribution flow using **QR-code shareable links**, allowing dataset expansion without requiring accounts; submission UI supports real-time preview and label-association across multiple prompts.
- Implemented data export features for labeled datasets in **CSV (pixel/base64)** format, reducing ML pipeline prep time and streamlining training workflows for image classification models.

EXPERIENCE

Undergraduate Researcher | *Python, Scikit-learn, Scrum, Data Analytics, K-means*

Jan. 2025 – present

National Space Intelligence Center through the Purdue Datamine

West Lafayette, IN

- Analyzed continental U.S. sensor data using K-means, hierarchical clustering, DBSCAN, GMM, and ST-DBSCAN, finding K-means best mirrored U.S. biomes.
- Developed an algorithm to track monthly cluster evolution via a global cluster pool, identifying temporal trends.
- Delivered insights on seasonal variations in optical and laser sensor data to enhance system performance.

Campus Representative | *Marketing, Outreach, Communication, Event Planning*

Feb. 2025 – present

Simplify

San Francisco, CA

- Represent Simplify at Purdue, promoting its job search tools and Chrome extension to the student body.
- Lead on-campus campaigns and organize events to boost brand visibility and user engagement.
- Coordinate with Simplify's core team to tailor marketing strategies based on student feedback.

Semiconductor Summer Intern | *Verilog, Xschem, Netgen, OpenLane*

Jun. 2022 – Aug. 2022

The Mitre Corporation

Colorado Springs, CO

- Developed application-specific integrated circuit (ASIC) for a transistor-based ring oscillator.
- Gained proficiency in Verilog HDL, design verification, and EDA tools such as Xschem, Netgen, and OpenLane.
- Conducted circuit simulations, schematic and layout design, and clock signal propagation in a 50MHz oscillator.
- Mentored a co-worker by teaching semiconductor design and verification methodologies.

SKILLS AND COURSEWORK

Skills: Python, Pandas, Matplotlib, scikit-learn, Latex, Tensorflow, JavaScript, HTML/CSS, C, React Native, Expo, Firebase, Github, Flask, Shell Scripting, Assembly, PyTorch

CourseWork: Problem Solving and Object Oriented Programming, Multivariate Calculus, Intro to Statistics, Foundations of Computer Science, Programming in C, Linear Algebra, Computer Architecture, Data Structures and Algorithms, Systems Programming, Data Mining and Machine Learning, Artificial Intelligence