

Katerina Dimitrova

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EDUCATION

The Pennsylvania State University

Bachelor of science in Computer Science — Minor in Engineering Leadership Development

University Park, PA

Aug. 2023 – May 2027

EXPERIENCE

Figma Campus Leader

The Pennsylvania State University

August 2025 – Present

University Park, PA

- Led design workshops for students, incorporating participant feedback to refine teaching materials on UI/UX, prototyping, and collaborative Figma workflows.
- Collaborated with Figma's community team to launch events connecting students with industry resources.

Director of Design for UPUA (Penn State Student Government)

The Pennsylvania State University

September 2025 – December 2025

University Park, PA

- Led the creative direction and visual branding for UPUA, producing digital and marketing materials in collaboration with executive leadership and multiple student government branches.
- Designed high-impact campaigns in Figma, ensuring consistent visuals across platforms and initiatives.

NCAA Division I Student-Athlete - PSU Women's Tennis Team

The Pennsylvania State University

August 2023 – Present

University Park, PA

- Demonstrated leadership by motivating teammates and taking responsibility in high-pressure situations
- Developed time-management and interpersonal communication skills and excellent ability to work both in teams and independently, with a strong work ethic and strong organizational skills

PROJECTS

SignLink - (ASL)-to-Text Translation System, (2nd Place, Nittany Ai Challenge)

- Developed a real-time ASL gesture-to-text translation system using OpenCV for capture, MediaPipe for landmark extraction, and a Temporal Vision Transformer for sign recognition, streaming live captions via virtual camera.
- Conducted user research on caption accuracy and accessibility, using feedback to improve model balanced accuracy from 51.5% to 89.7%, with further refinement increasing it to 94.8%.

EyeQ - Based Vision Estimation System, (2nd Place, HackPSU 2026)

March 2026

- Developed a vision screening application using Python, Streamlit, and OpenCV, implementing an adaptive binary search algorithm to estimate refractive error with ± 0.25 D precision.
- Built a real-time computer vision pipeline using OpenCV, NumPy, and Pillow to detect a credit card via HSV color masking and estimate user-device distance using a pinhole camera model for accurate calibration.

AI Cognitive Distortion Detection System

January 2026 – Present

- Using a locally served LLM (via vLLM) to analyze diary entries from post-concussion patients to detect cognitive distortions in their self-reported thoughts—determining whether distortion is present and identifying its type.
- Investigating how cognitive distortions in patient-generated text relate to concussion symptom burden and recovery outcomes, aiming to identify thought patterns that may perpetuate or predict persistent post-concussive symptoms.

Book-selling Website

April 2026

- Designed UI/UX in Figma; built the website using React, TypeScript, Node.js, and Supabase
- Integrated third-party APIs for payments (Stripe), email (Resend), and database management (Supabase).

CORE SKILLS

Programming Languages: Python, Java, C, HTML, CSS, JavaScript, TypeScript, SQL

ML/CV: PyTorch, NumPY, MediaPipe, OpenCV, GRU, Transformers

Design Tools: Figma, Canva

AI Prototyping and Development Tools: Copilot, Claude Code, Cursor, React, Node.js, Vercel, Supabase

Relevant Courses (Skills): Data Structures and Algorithms, Object-Oriented Design and Programming, Systems Programming, Computer Networks, Database Systems, Microsoft Office 365

Fluent Languages: English, Bulgarian

CERTIFICATES

Google UX Design Professional Certificate