Marko Tsymbaliuk

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EDUCATION

Gettysburg College Gettysburg, PA
Bachelor of Science in Computer Science, Minor in Economics Fall 2026
GPA: 3.62 | Dean's List
Relevant coursework: Object-Oriented Programming, Data Structures and Algorithms, Databases, UI/UX Design, CodePath Web Development, Technical Interview Prep (Advanced), Discrete Mathematics, Linear Algebra

SKILLS & CERTIFICATIONS

Programming: Java, Python, JavaScript, TypeScript, R, SQL, C/C++
Tools: React, React Native, Node.js, Firebase, Git/GitHub, Spring, Spring Boot, FastAPI, PostgreSQL, MySQL, Redis, WebSocket, Tailwind CSS, TensorFlow, Keras, Scikit-learn, Electron.

PROJECTS

CodeCafé - Full Stack Developer |Independent Project |Team of 2 GitHub |Live Demo

- Developed a **real-time collaborative coding environment** achieving **<50ms synchronization latency**, supporting up to **20 concurrent users** per session.
- Engineered a **robust backend** using **Java Spring Boot** and **WebSocket**, capable of handling **500+ daily code executions** with **99.9% success rate**.
- Designed a **secure**, **sandboxed execution environment** supporting **8+ programming languages**, leveraging **Piston API** for **efficient code execution** with **200ms average** response times.
- Created a **responsive**, **intuitive UI** with **React** and **TypeScript**, providing features like **syntax highlighting**, **autocomplete**, and **error detection**.
  Utilized: *React, TypeScript, Java Spring Boot, WebSocket, Redis, Piston API, Monaco Editor*

Spamurai - Full Stack Developer | Independent Project | Solo Developer GitHub | Website | Live Demo |Chrome Web Store

- Built a **Chrome extension enhancing Gmail's spam filtering** with **94% detection accuracy** using a custom **LSTM model**.
- Built a **full-stack solution** combining **React** and **FastAPI**, processing **hundreds of emails** daily with **sub-200ms** response times.
- Implemented **secure OAuth 2.0** authentication and a **privacy-conscious** analytics **dashboard** with **PostgreSQL** for tracking user statistics and spam trends.
- Deployed on **AWS** with **EC2**, **RDS**, and **Route 53**, maintaining **99.9% uptime** and scaling to support **1,000+ concurrent users**.
  Utilized: *React, Vite, FastAPI, PostgreSQL, AWS (EC2, RDS, Route 53), OAuth 2.0, Chrome Extension API, TailwindCSS, Recharts, LSTM Neural Networks, Python, TypeScript, Nginx, TensorFlow, Keras, Scikit-learn.*

Dermafyr - Full Stack Developer |**Best of Show Winner YCP Hacks '24** | Team of 4 GitHub | Live Demo |Devpost

- Developed an **AI-powered dermatological analysis system with 97% accuracy in skin condition detection.**
- Engineered a dual-platform solution integrating **Llama** for offline **data privacy** and **Gemini API** for web-based processing.
- Created a **comprehensive analytics dashboard** using **React** and **Material-UI**, providing users with actionable recommendations based on real-time skin analysis.
- **Optimized performance** for **cloud** and **Raspberry Pi edge devices**, ensuring **high accuracy** across varying conditions and delivering **AI-driven recommendations** seamlessly across both platforms, with **MySQL** managing **structured data storage**.
  Utilized: *React, Electron, FastAPI, TensorFlow, Raspberry Pi, Llama, Gemini API, Python, JavaScript, Transfer Learning, Computer Vision, Edge Computing, Tailwind CSS, MySQL*

Climately - Full Stack Developer | **HackHarvard '24** | Team of 3 GitHub | Devpost

- Developed a **Chrome extension** at **HackHarvard** that leverages **ML** to **optimize scheduling** by **analyzing weather patterns** and **calendar conflicts**.
- Developed a **Spring Boot backend** with **OAuth 2.0 authentication**, integrating **OpenAI** to provide **AI-powered** scheduling **suggestions** based on real-time weather data.
- Implemented **real-time weather monitoring** that **automatically** suggests schedule adjustments based on forecast changes.
  Utilized: *React, Java Spring Boot, Google Calendar API, Weather API, OpenAI API, Google OAuth*

RELEVANT EXPERIENCE

Gettysburg College - Computer Science Teaching Assistant (TA)| Gettysburg, PA Fall 2023 – Spring 2024

- Assisted students with Python programming, improving grades by **25%** through review sessions and one-on-one help.
- Improved understanding of **Object-Oriented Programming (OOP)**, boosting assignment and project completion.
- Supported course management and student engagement, leading to positive feedback from **95%** of students.

AFFILIATIONS & INTERESTS

Officer |ACM Club | Gettysburg College Spring 2023– Spring 2025
Volunteer |Painted Turtle Farm | Gettysburg College Spring 2023– Spring 2025
Interests: hackathons, drawing, 3D modeling (self-taught over 3 years), sculpting, running, volunteering.