Ivan Cabrilo

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EDUCATION

University of Rochester — Rochester, New York

Bachelor of Arts in Computer Science, Machine Learning track & minor in Business — *August 2022 – May 2026*

- GPA: 3.66/4.00, Dean's List
- Courses: Intelligent Systems, Compiler Consturction, Compuation and Formal Systems in C, Data Structures & Algorithms, Discrete mathematics, Business Analytics, Financial Management, Statistics & Probability, Economics, Accounting, Marketing, Finance in Real Estate
- Honors: Whipple Science Scholarship ($12,000/year), Rochester National Grant ($50,000/year), Shelby Davis UWC Award ($30,000/year)
- Clubs: Computer Science Undergraduate Club, Google Developer Club, Bouldering club

TECHNICAL SKILLS

- Programming: Python, Java, TypeScript, JavaScript, SQL, C/C++
- Libraries: React, Hugging Face, NumPy, Matplotlib, Pandas, TensorFlow
- Certifications: ML by Stanford University, CodePath Web Dev, CITI
- Frameworks: Next.js, Docker, PyTorch, NodeJS
- Languages: Serbian, English, Spanish, German
- Cloud: AWS, Google Colab; version control, Git

ENTREPRENEURSHIP

Sorriso.care

Co-Founder & CTO — *April 2024 – Present*

- Secured $30,000 in funding from the Innovation Fund of Montenegro to launch a tech startup enhancing medical tourism
- Wokring on enhancement of SEO and organic traffic growth through Ahrefs, as well as paid traffic with targeting google ads
- Overseeing MVP development of Next.js full stack app with mobile development, hosted on Vercel with Tailwind for frontend UI/UX design
- Negotiated a deal with private clinic to secure a 15% share of the total treatment revenue, current total revenue generated is $48,000

RESEARCH

Rochester Human Computer Interaction Lab — Rochester, New York

Undergraduate Machine Learning Research Assistant

PARK Project — *September 2023 – Present*

- Built user guide for a PARK web app using TypeScript and Google's MediaPipe for Face Landmark Detection API
- Fine-tuned WaveLM and V-JEPA deep learning models on 300 audio & 500 video recordings, to extract features for Parkinson's disease using VisionTransformer and Wav2Vec2ForSequenceClassification; Data cleaning and Preprocessing of outliers
- Employed multimodal fusion layer by aligning & integrating audio-visual embeddings, achieving 75% accuracy in classifying Parkinson's disease patients; Showcasing problem-solving, and excellent communication skills with my mentor
- Read over 20 scientific paper and implemented the transformer based architecture with self-attention from Attention is all you need paper

Project Sophie Artifical Intelligence — *January 2023 – August 2023*

- Joined a team of PhD students in Agile setting to develop an interactive AI-driven virtual 'patient' bot, worked on data collection
- Trained the bot's neural networks to recognize written numbers using LeakyReLU and Normalized tanh(x) in PyTorch

EXPERIENCE

Event and Classroom Management — Rochester, New York

Desk-Technician — *March 2023 – May 2024*

- Provided prompt and comprehensive technical support across MacOS, Linux, and Windows operating systems, ensuring smooth operation
- Diagnosed and repaired hardware issues on Apple, Dell, Crestron, Owl and Lenovo devices, as well as Xerox and HP printers
- Managed server connections and network troubleshooting, demonstrating a solid understanding of TCP/IP, LAN technologies
- Transported and engaged in equipment set up for classrooms and events, ensuring readiness in dynamic environments, attention to detail

Cikom — Podgorica, Montenegro

Data Science Intern — *June 2023 – August 2023*

- Implemented a relational database for inventory management, reducing update time by 20% through product categorization and MapReduce approach for efficient batch processing, demonstrating strong problem-solving skills
- Worked on optimizing backend of MySQL server performance in cross-functional environment using AWS EC2 for horizontal scaling and sharding, achieving 17% increase in query speed and 5% reduction in operational costs

Funko Dojo — Glen Rock, New Jersey

Software Engineer Intern — *November 2022 – January 2023*

- Engineered a robust Python-based web scraping framework utilizing BeautifulSoup for HTML parsing and Python Requests for data retrieval from retailer websites. Optimized product monitoring with Slack API, resulting in 25% faster real-time response
- Leveraged Amazon Web Services S3 through the boto3 library as a scalable storage solution for our Funko Dojo SaaS, securely storing and retrieving scraped data within a Python web scraping framework

PROJECTS

Bouldering Pose Detecion

- Developing algorithms to calculate overreliance on specific limbs or joints during climbs, leveraging this project to improve my climbing skills through quantitative insights and data visualization with matplotlib, potentially developing end-to-end application with Docker and AWS
- Implemented a computer vision pipeline using Mediapipe for Pose Landmark detection to extract 3D coordinates of limb & joint data points from my bouldering videos, filtering low-visibility points (<65%), averaging hand landmarks to reduce noise in missing data, skipping every 2nd frame to increase processing speed by 100%; Data is stored in JSON file, for easy conversion into Pandas DataFrame for further analysis

HackHarvard — Boston, Massachusetts

- Developed CommonPrompt, an open-source web app addressing ethical challenges in GPT-3.5 by collecting user data for fine-tuning the model, to prevent harmful jailbreak exploits

TEACHING EXPERIENCE

CSC 172 – Data Structures & Algorithms

AWARDS

Schwarz Discover Research Grant – University of Rochester