

Marko Ljuboja

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EDUCATION

DePaul University, Jarvis School of Computing & Digital Media, Chicago, IL

Graduating November 2025

BS in Computer Science, Software Development Concentration, Spanish Minor, GPA 3.71

Relevant Coursework: Data Structures I & II, Design & Analysis of Algorithms, Systems I & II, Global Software Development

SKILLS + STRENGTHS

Technical

- **Programming Languages:** Java, Python, C, C++, SQL, R
- **Web & Mobile Development:** HTML, CSS, JavaScript (React.js, Astro), REST APIs, Swift (iOS)
- **Development Tools:** Git, Docker, Unix/Linux command-line, PuTTY, JUnit 5, Gradle, Maven, Vercel, Google Cloud

Soft Skills

- Strong leadership, effective communication, team collaboration, results-driven, self-disciplined, fast learner

Languages

- English (native), Serbian (native), Spanish (working proficiency)
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PROJECTS

Stem Player iOS Application

- Created an iOS app that takes YouTube links from users, processes the audio into 4 separate tracks ("stems"), and enables users to manipulate the separated tracks.
- Engineered synchronized multi-track playback using AVAudioPlayer for precise control of each isolated track.
- Constructed a background processing system with Flask microservice for audio stem separation using Demucs neural network, processing songs in ~1.5x song length.

Northern Trust Hackathon Project - 3rd Place of 15

- Designed a comprehensive foreign exchange trading platform using React that integrates real-time currency conversion, trading simulation, and predictive analytics.
- Built an interactive interface with portfolio tracking, trade history, and real-time exchange rate data via API integration.
- Implemented an LSTM (Long Short-Term Memory) machine learning model to predict currency exchange rate trends and identify optimal trading opportunities. Data is visualized with Chart.js.

Fantasy Draft Algorithm

- Scraped thousands of NBA player statistics and analyzed data using pandas and NumPy for score calculations.
 - Implemented a dynamic scoring engine incorporating performance metrics, injury risk, age, and positional scarcity.
 - Launched automated data analysis pipeline to optimize draft strategies with dynamic player rankings.
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PROFESSIONAL EXPERIENCE

Chicago River Canoe and Kayak, Willow Springs, IL

May 2024 – October 2024

Boat Launch Assistant

- Welcomed over 50 customers daily, ensuring timely processing of waivers and enhancing customer satisfaction.
- Assisted with boarding, provided safety guidance, and performed water rescues as needed.
- Managed daily transactions, securely handling up to \$2,000 per shift.

Café Salsa, La Grange, IL

January 2023 – January 2024

Busboy

- Engaged with hundreds of customers daily to fulfill their needs.
 - Maintained food safety and quality standards.
 - Followed instructions in a demanding and fast-paced environment.
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ACTIVITIES

DePaul Serbian Cultural Club

January 2024 - Present

President

- Led the planning and execution of cultural events, managing budgets and fundraising efforts to support community.

DePaul Orthodox Christian Fellowship

October 2022 – Present

Member

- Participated in community service projects, fostering group engagement and contributing to local charitable initiatives.

DePaul Computer Science Society

October 2022 – Present

Member

- Competed in software development hackathons and networked with industry professionals at guest speaker events.