

# COJOCARU ANA-CĂTĂLINA

Software Engineer - Bucharest, Romania

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## PROFESSIONAL SUMMARY

Software engineer with a strong focus on backend development and data-driven applications. Experienced in building RESTful APIs, working with SQL/NoSQL databases, and deploying scalable systems using Docker. Comfortable in Agile teams and CI/CD environments. Proficient in Java, Python, and modern frameworks like Spring Boot, Flask, Node.js, React.

## EDUCATION

**Technical University of Cluj-Napoca**

*Bachelor of Engineering in Computer Science*

Cluj-Napoca, Romania

*Oct 2021 – July 2025*

**"Emil Racoviță" National College**

*Mathematics and Informatics*

Cluj-Napoca, Romania

*Sep 2017 – July 2021*

## EXPERIENCE

**Backend Intern – Progress OpenEdge**

*Cluj-Napoca, Romania*

Wayfare

*June 2024 – Sep. 2024*

- Contributed in Agile SCRUM teams to build and maintain backend systems for clients
- Designed and tested RESTful APIs for enterprise-scale platforms using Progress OpenEdge
- Optimized database operations to improve integrity and performance, optimizing over 20 tables
- Assisted in deployment with automated testing pipelines

**Embedded Systems Intern**

*Cluj-Napoca, Romania*

AROBS Transilvania Software

*June 2023 – Sep. 2023*

- Worked on STM32-based automotive systems with UART, I2C, and SPI integration
- Developed and debugged firmware for sensor interfacing and data processing in C
- Applied automotive engineering practices and real-time embedded programming techniques
- Improved firmware stability by 20% through testing

## PROJECTS

**Gesture Typing Extension** | *Python, JavaScript, TensorFlow, Scikit-learn*

- Trained gesture-recognition models for ASL translations and word prediction using CNN and LSTM
- Built a custom preprocessing pipeline for hand gestures
- Trained LSTM for next-word prediction and a model for word autocorrection
- Integrated real-time inference into a browser extension using TensorFlow.js
- Enabled gesture-to-text typing with over 90% prediction accuracy on test data

**Real-Time Chat System** | *Java Spring, React, WebSockets, Docker*

- Built a full-stack chat app with WebSocket-based real-time messaging and user presence tracking
- Used Java Spring Boot for backend REST APIs and message queues
- Integrated React frontend with session-based authentication and responsive design
- Containerized application using Docker for scalable deployment

**E-commerce Platform** | *Java Spring, React, WebSockets*

- Developed a modern shopping platform with real-time cart and order notifications
- Implemented secure user authentication, product browsing, and order history modules
- Designed scalable backend architecture with efficient REST API routes and caching

**Library Management System** | *Progress OpenEdge, React*

- Created a full-stack app for managing books, members, and inventory
- Built user roles (admin, librarian, reader) with access control
- Used OpenEdge ABL for database procedures and integrated UI with real-time updates

### **Smart Arduino Robot** | *C++, Arduino*

- Programmed sensors to monitor soil moisture and automate irrigation in real-time
- Optimized power consumption using sleep cycles and threshold-triggered logic
- Implemented LCD feedback and serial logging for diagnostics and testing

### **Battleships Game** | *Assembly*

- Created a two-player game in low-level Assembly to demonstrate memory handling and logic
- Used direct memory addressing and ASCII graphics for game visualization

## TECHNICAL SKILLS

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**Programming Languages:** Java, Python, C, C++, SQL, MySQL, JavaScript, PHP, HTML, CSS

**Web and Backend Development:** React, Node.js, Flask, Spring Boot, REST APIs, WebSockets

**Data Visualization and App Design:** UI/UX design principles, and front-end visualization libraries

**Testing and CI/CD:** JUnit, Docker, Git

**Cloud and DevOps Tools:** Google Cloud Platform, GitHub Actions, Docker Hub

**Soft Skills:** Leadership, Initiative, Problem-solving, English Fluency, Growth Mindset