


BÂRGĂOANU BOGDAN ALEXANDRU

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Experience

PIM Software Transilvania

June 2023 – Present

Full Stack Software Developer

- CRM Platform Development Lead @ ActivityApp.
- Extended the platform by enhancing features, optimizing performance, and integrating scalable components to support additional functionalities.
- Implemented a real-time data and notifications system for mobile and desktop applications using WebSockets, enabling instant updates and seamless bidirectional communication across multiple devices.
- Developed an activation system for the platform, enabling centralized management of company-specific activation parameters alongside a robust security framework, allowing owners to oversee user accounts, enforce permissions, monitor activity logs, and maintain secure communication channels.
- Developed a real-time Kitchen Display System web application using Next.js for the PIM POS platform.
- Interviewed and mentored early-stage software engineers, including students completing practical work in software engineering.

Education

Technical University of Cluj-Napoca

Sep. 2025 – Present

Master's of Artificial Intelligence and Vision

Cluj-Napoca, Romania

Technical University of Cluj-Napoca

Oct. 2021 – July 2025

Bachelor's of Systems Engineering - Applied Informatics

Cluj-Napoca, Romania

- Thesis graded: 10/10.

– Relevant Coursework:

- Computer Programming, Industrial Informatics, Data Structures, Databases, Computer Architecture, Web Technologies, Digital Security, Data Transmission, CAD, Linear Algebra, Numerical Calculus, Process Modelling, System Theory, Control Engineering, System Identification, Real Time Systems.

"Andrei Mureșanu" National College

Sept. 2017 – June 2021

Baccalaureate - Mathematics and Computer Science

Bistrița, Romania

Projects

MoneyStream | *React.js, Node.js, Express.js, MySQL, Bootstrap, Swagger, Google Charts*

March 2025

- MoneyStream is a comprehensive platform designed to provide users with real-time exchange rates, manage exchange rate data, and visualize currency trends.
- The architecture comprises a robust backend server, an administrative interface facilitating centralized management of geographically distributed data points, and a client-facing interface designed to enable end-users to dynamically query optimal or nearest currency exchange rates through computational implementation of the Haversine formula for geospatial distance calculations.
- Designed and managed relational database structures with a pagination system, ensuring efficient data storage and retrieval.
- SMTP protocol integration for automated email notification services, a JWT-based authentication mechanism to enforce secure token-based access control, and adherence to OAuth2 standards for robust authorization protocols.
- Project featured in "Internet of Things Student Challenge 2025".

ExpressParcel | *React.js, Java, Spring Boot, MySQL, Bootstrap*

December 2024

- Engineered a full-stack package delivery platform using Spring, React, and MySQL that streamlined courier logistics, from dynamic assignments to real-time, AWB-based client tracking.
- Developed a scalable backend system with a Controller-Service-Repository architecture to handle user authentication, business logic, and automated delivery confirmations via SMTP, ensuring data integrity and system maintainability.
- Built two user-facing applications: an admin app for complete courier and package lifecycle management and a client app featuring package tracking via AWB, manager performance dashboards and direct courier contact options, enhancing operational oversight and customer experience.

WiFi Gate | *C++, JavaScript, HTML, CSS*

December 2024

- Lightweight, ESP8266 or ESP32-based server application for wireless garage door control. It provides a web interface for opening and closing your garage door, with added safety features to detect obstructions using an infrared sensor.

CashflowApp | *Vue.js, Node.js, Express.js, MySQL, Bootstrap, Swagger, Google Charts*

July 2024

- A comprehensive, full stack cashflow management application developed using Vue.js on the front-end, Node.js with a MySQL database on the backend, and an Express.js API to facilitate seamless data exchange and visualization via Google Charts.
- Features an in-depth documentation for the app implementation, as an introduction to Vue, submitted to the Industrial Informatics Laboratory at the Technical University of Cluj-Napoca, Faculty of Automation and Computer Science.

Self-driving car with JS | *JavaScript, HTML, CSS*

February 2024

- This project implements a simulated self-driving car in JavaScript that utilizes a neural network for decision-making.
- The web application offers an interactive interface to visualize real-time neural network parameter adjustments for autonomous navigation, with the ability to save the best model for optimal configurations.
- Designed to be a learning experience in both neural networks and self-driving car concepts.

WriteDetect | *C#*

December 2023

- An implementation for classifying the MNIST dataset using C# with a neural network for the goal of identifying hand writing.
- The project delivers a fully self-contained implementation of a feed-forward neural network featuring configurable layer sizes, sigmoid activation functions and custom matrix utilities, weight initialization, forward propagation and back-propagation training routines with no external libraries.

Certifications

IBM Full Stack Software Developer | *IBM*

June 2025

JavaScript Algorithms and Data Structures | *freeCodeCamp*

June 2024

Responsive Web Design | *freeCodeCamp*

March 2024

Foundational C# | *Microsoft - Score: 70/80*

February 2024

C1 Advanced | *Cambridge Assessment English - Score: 191*

March 2021

Volunteering

Internet of Things Student Challenge

March 2025

Competitor - MoneyStream

Cluj-Napoca, Romania

- * Participated in the Internet of Things Student Challenge program with an innovative IoT project, developed under the guidance of academic experts, ICT mentors, and industry specialists in Romania.
- * Developed public speaking and pitching skills, while also cultivating goal-oriented thinking through the creation of an application based on a business plan with the potential for real-world implementation.

Technical Skills

Languages: C#, JavaScript/TypeScript, SQL, Java, C++, C/Embedded C, Python, HTML, CSS, MATLAB/Simulink, Ladder Logic.

Frameworks: .NET, React.js, Node.js, DevExpress, Next.js, Vue.js, Express.js, ASP.NET, .NET MAUI, Bootstrap, Tailwind CSS, React Redux, Spring, Tensorflow, Keras, Flask, Django.

Tools: Visual Studio, Visual Studio Code, Git, SQL Server Management Studio, MySQL Workbench, Postman, PyCharm IDE, IntelliJ IDEA, Docker, Kubernetes, MongoDB Atlas, Arduino IDE, Siemens TIA Portal.