

RUSU DINU-ȘTEFAN

Senior FullStack Software Engineer

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EDUCATION

Master of Software Engineering
Bachelor of Computer Engineering

University Politehnica of Bucharest
University Politehnica of Bucharest

📅 Oct 2024 – Jul 2026
📅 Oct 2020 – Jul 2024

EXPERIENCE

Senior FullStack Software Engineer

Tazz by eMAG

📅 Aug 2021 – present 📍 Bucharest, Romania

- Since February 2024, **Lead developer** of the LAAS team.
- Playing a **key role** in the development of Tazz direct (LAAS) service, finishing the MVP in **under three months**.
- **Audit system**, which allows for a selected order to be inspected, providing details about the order, the user, the products, and the delivery.
- **Architecture** for a **custom access control system**, in order to prevent unauthorized access to the database, and **managed permissions elevation** for users. **Coordinated** 2 junior developers that built this project, lead and helped them with various tips and tricks.
- Developed KPIs and **custom system alerts** that prevented **loss of data** and contributed to the **overall improvement of the system** by providing scheduled reports and alerts on Teams and email. This is **highly customizable**, as a new alert could be added to the system by just providing a new JSON config.

Contracted Trainer

Deutsche Bank Cloud School 2022 & 2023

📅 Mar – Sept 2022 & Aug – Sept 2023

- Taught Juniors from Deutsche Bank the basics of Git, Java and Spring Boot, Angular and React. **Showcased** both basic and **advanced concepts** of programming, OOP and REST APIs, such as CRUD, authentication, authorization, JPA, JWT.

SKILLS

I can quickly pick-up new technologies and adapt to new environments, and I have already worked with:

Java, Dart, Typescript, Javascript, Python, NestJs
Spring Boot, Flutter, Angular
Docker, Postgres, MongoDB, Elasticsearch, AWS

VOLUNTEERING

- Judge & Mentor at the National & Online Olympiad "InfoEducatie" in 2021 & 2022
- Organizer, Mentor & Judge at "Hardcore Entrepreneur" in 2021, 2022, 2023 & 2024
- Lead developer for Vianu MUN, a simulation of the UN proceedings in 2019

HONORS & AWARDS

- "LIFELINE-Emergency Patient Data in a Distributed Manner" **IEEE International Conference on Blockchain**, Smart Healthcare and Emerging Technologies (SmartBlock4Health), Bucharest, Romania, 2022, pp. 1-5, doi: 10.1109/SmartBlock4Health56071.2022.10034522.
- Invited at **PRO TV in 2019 & 2022** (ILikeIT)
- Placed **1st place** at the Scientific Session - UPB 2022
- Placed **2nd place** at the Scientific Session - UPB 2021
- Placed **2nd place** at Infoeducatie Nationala 2020
- Placed **3rd place** at Infoeducatie Online 2020
- Placed in top 15% at Infoeducatie Nationala 2019

PROJECTS

Lifeline

- A **blockchain**-based application that shows vital data about the patients. The smart contract is stored on the **Ethereum blockchain** and assisted by the back-end written in Spring Boot with MongoDB and Flutter as front-end.

Comentarii BAC Romana si eseuri audio

- A cross-platform app with essays for a National Exam. More than **25000 total downloads** and **3000 active users monthly**.
- **Top 5 trending educational apps** on Google Play, summer of 2021 and top 20 on App Store in 2024.

Divers Data

- Developed the **first virtual logbook for drivers**. Drivers Data is a cross-platform serverless app that can generate PDF and Excel **reports for up to 3 years, in under 15 seconds**. More than 50 users daily, with a total of 3000 MAU.

Custom Built CDN

- Built a custom CDN from scratch using Spring Boot. Optimized for **serving images in under 50ms** [tested in Romania, on devices with latency under 10ms]. Auto-image resizing and smart cache. **Computer vision** endpoint for recognising faces for auto generation of profile pictures.

OTHER PROJECTS

EHR Blockchain & LLM based platform

📅 Dec 2023 – Jul 2024

- Developed a web platform for storing and managing Electronic Health Records as well as prescriptions, using the Hyperledger Fabric private **blockchain** to store the data and the Llama3 **Large Language Model** to create a **chatbot** for the platform, which can be asked by users to fetch data from the blockchain.
- The platform is built using **Angular** for the frontend which interacts with the two microservices built in **NestJs**, the core backend which connects to a **Postgres** as well as to the two Smart Contracts (chain code, written in Typescript) deployed on the **Hyperledger Fabric** network and the chat middleware which connects to a **MongoDB** database.
- Authentication is done using **Keycloak** and provides different roles for the users, such as doctor, patient, and pharmacist, to which the user interface adapts.

Gomoku MiniMax

📅 May 2023

- Developed in **Scala** a Gomoku game that can play against a human player and win in most cases due to the implementation of **MiniMax**, with **Alpha-Beta pruning and memoization**.
- Played against my colleagues and the AI of the teacher which resulted in draws and some wins for my AI.

Web & Mobile Software Engineer for Cosmin Savu & Paul Angelescu

📅 Dec 2019 – March 2021

- Developed in **under 1 week** their websites and cross-platform Mobile Apps in an Agile manner, using React & Angular (SSR + SSG), Flutter, Spring Boot, MongoDB, Firestore, Elasticsearch and a custom-built CDN for fast-size-optimized images, based on a Hybrid-cloud architecture.

Kubernetes Cluster using 3 Raspberry Pi4s

📅 February 2021

- Built and maintained a server used for Web Hosting (microservices & other backend-specific stuff).
- Set up a high performance Kubernetes Cluster using three Raspberry Pi4s, to host auto-scaling containers for the Drivers Data microservices.
- Set up: RHEL8 (Red Hat Enterprise Linux 8), NGINX (reverse proxy, cache, SSL, HTTP2, backup server redirects), Prometheus, Grafana, MongoDB, Elasticsearch, Kibana, Prometheus, Docker.
- Custom fan speed controls using IPMI.
- Auto server restart on power loss.
- Auto app-restart (for the hosted microservices / apps) on power loss / server crash.
- Auto SSL certificate renew.
- Also deployed everything on a Dell PowerEdge R610 server.

PVP Minesweeper

📅 March 2021 - April 2021

- Built a **cross-platform mobile app**, which is a **realtime PVP** flavor of the popular Minesweeper game.
- Various leaderboards and board skins, selectable in-app.
- Used **Spring Boot (Websockets, MongoDB)** and Flutter.

Game Assembler & Emulator - "Fantasy Game Console"

📅 Hackathon "Infoeducatie" 2020 - 24h

- Developed with my teammate an Assembler and Emulator, written in C++, for packing and playing games on an emulated old console.
- 128 bytes of RAM, 4000 bytes of ROM, 3840 VRAM, a resolution of 40 x 192 pixels.
- 6 general registers and 4 special registers for the program counter, stack indicator, input data, and a utility of your choice.
- 6507 instructions per frame, 60 frames per second.
- All registers are one byte in size.