Octavian Marina, Software Developer

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Date of birth 20/06/2001

Summary

Motivated Master's student in Applied Computational Intelligence at Babeș-Bolyai University, with a Bachelor's degree in Computer Science. Currently employed as a Java Software Developer, with a strong foundation in software engineering and a keen interest in AI and advanced computational technologies. Dedicated to delivering high-quality software solutions while continuously expanding technical expertise.

Education

Oct 2021 - Jul 2024 Bachelor's degree in Computer Science, Universitatea Babeș-Bolyai, Cluj-Napoca

Built a strong foundation in algorithms, data structures, operating systems, and database systems. Studied discrete mathematics, linear algebra, and calculus, applying them to computational problem-solving. Gained practical experience in Java, Python, and C++, with a focus on object-oriented programming, design patterns, and software development methodologies, preparing for complex challenges in software engineering.

Oct 2024 - Present Master's Degree in Applied Computational Intelligence, Babeș-Bolyai University, Cluj-Napoca, Romania

Focused on artificial intelligence, machine learning, neural networks, and optimization techniques. Gained expertise in developing AI-driven solutions and applying computational methods to real-world problems, blending theory with practical implementation.

Work Experience

Mar 2023 - Present Java Software Developer, Info World (Part-Time)

- Developed and implemented algorithms for processing and analyzing DICOM medical images, enhancing diagnostic accuracy and efficiency in healthcare applications.
- Optimized the performance of applications used for viewing and interpreting medical images, ensuring a seamless user experience for healthcare professionals.
- Ensured compliance with international standards such as DICOM and HL7, achieving interoperability and compatibility with various medical equipment and systems.

Skills

Programming Languages: Python, JavaScript, C, C++, Java, TypeScript, Swift

Frameworks & Libraries: Spring Framework, TensorFlow, NumPy, Pandas, Scikit-learn etc...

Databases: SQL, MongoDB, Firebase, PostgreSQL

3D Graphics: OpenGL, Three.js

Web & Mobile Development: HTML, CSS, React, React Native, Swift (Native iOS development)

Operating Systems: Linux environment experience, Shell scripting, AWK, GREP, SED

Software Tools: MATLAB, MAPLE

Projects and Research

MediCortex - AI-Powered Medical Research Search Engine

MediCortex is a native iOS application that allows healthcare professionals and researchers to search for medical articles by typing queries in natural language. It uses a fine-tuned BERT model, trained in the cloud on an optimized dataset of over one million medical articles, to understand complex queries and return relevant results from databases like PubMed.

The app is built with a Django backend for data management and uses Firebase for secure user authentication, providing a seamless and efficient tool for accessing critical medical information.

Unplugged - Focus & Social Connection App

Unplugged is a React Native app designed to encourage focus and social interaction by creating sessions where participants disconnect from their phones. The app connects multiple devices, starts a synchronized timer, and tracks session progress. Built with Firebase for authentication, real-time data handling, and a secure payment system, the app also integrates Tailwind for styling. It features a login system and a subscription-based payment model, enabling users to access premium features. Unplugged combines functionality and simplicity to promote mindful use of technology.

AbstractStruct - Medical Abstract Structuring Tool

AbstractStruct is an application designed to transform and structure medical abstracts into standardized sections, including Introduction, Methodology, Results, and Conclusions.
The project utilizes multiple machine learning models, developed and analyzed for optimal performance in reorganizing medical abstracts. The application features a Django-based API for backend processing and a React client for the frontend, ensuring seamless integration and user interaction. This setup delivers robust and reliable outputs, making scientific content more accessible and easier to interpret for researchers and healthcare professionals.

EduSphere - Interactive Platform for Teachers and Students

EduSphere is a web application designed to streamline communication and collaboration between teachers and students. Built with React and Firebase, it provides a user-friendly interface for managing educational tasks and resources.
Teachers can create accounts to post announcements, upload materials, assign homework, and launch quizzes. Students can access these resources, submit assignments, and participate in quizzes. Teachers are notified upon homework submissions, can review and grade them, and provide feedback. The quiz system offers automatic grading, providing immediate results to students. The platform emphasizes real-time functionality, secure user authentication, and a smooth user experience, making it a versatile tool for modern education.

Research on Stock Market Prediction and Trend Analysis

My research focuses on algorithms and methodologies for detecting price movements, analyzing trends, and addressing black swan events, with a particular interest in the S&P 500 index and Bitcoin. These topics hold significant interest, aiming to develop robust solutions for trend detection and risk assessment using advanced machine learning and data analysis techniques.

MyPortfolio - 3D Interactive Personal Website

A modern, responsive website built with React, React Three Fiber, Three.js, and Tailwind CSS. The site features interactive 3D elements, animations, and a clean design to showcase projects, research, and professional background. Visit: octavianmarina.com.

Languages

Romanian	Native Speaker	English	Fluent

Links

Find out more on my website.