Andrei Petrea

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Education

University POLITEHNICA of Bucharest   October 2021 - July 2025
Bachelor of Computer Sciences
- **Relevant Coursework:** *Operating Systems, Data Structures and Algorithms, Object Oriented Programming, Algorithm Design and Analysis, Programming Paradigms, Parallel and Distributed Programming, Computer Architecture, Computer Networks, Databases, Artificial Intelligence*

Undergraduate Teaching Assistant   September 2023 - Present
Programming Paradigms
- Delivered tailored mentorship and individualized support to students, empowering them to expertly employ functional programming methodologies in Lisp and Haskell, while also introducing the principles of logical programming in Prolog

Object Oriented Programming
- Provided hands-on guidance and support to students in mastering the practical application of OOP concepts, with a focus on Java, fostering their ability to create real-world software solutions effectively

Projects

GuardVPN | *React.js, TailWind CSS, Python, Flask, MongoDB, WireGuard, Droplets*   December 2023
- Developed a **SSO** over WireGuard for securing client's connections from multiple devices by automating the WireGuard Tunnel configuration and deployment
- Designed and deployed a scalable **RESTful API** using **Flask**, making full use of our cloud-based solution
- Implemented a fully responsive website using **Tailwind CSS** and **React**, adhering to best practices

CyberSecurity Learning Platform | *Next.js, TailWind CSS, Express.js, PostgreSQL, Prisma ORM*   November 2023
- Implemented an online platform for interactive **cyber security learning** through **gamifying** the learning experience with fun, hands-on activities
- Utilized **Next.js** in conjunction with **Tailwind CSS** and **Framer Motion** for an engaging and satisfying UI/UX
- Integrated **Auth.js** for easy and seamless user authentication through various providers like Google, X and GitHub, prioritizing user convenience and privacy

Online Chess Game | *React.js, Express.js, Socket.IO, HarperDB, Docker*   July 2023
- Contributed alongside two colleagues to the development of an online room-based chess app offering the opportunity to play against **AI bots** of varying difficulty or against other **human players**
- Implemented a real-time chat feature using **WebSocket** and **Socket.io**, enhancing user engagement and interactivity
- Deployed the app in a **Docker** container for a fast and streamlined experience in any working environment

Certificates

Web Programming 101   Hackademy
To-Do List
- Developed a minimalist to-do application using vanilla **HTML**, **CSS** and **JavaScript**, leveraging **sessionStorage** for data storage, emphasizing lightweight functionality and browser compatibility

Python Programming 101   Hackademy
Discord Bot
- Engineered a multi-functional Discord bot capable of playing music via the **YouTube API** or MP3 files, while also managing server tasks efficiently, demonstrating expertise in **asynchronous programming** and **API integration** within an established environment

CCNA1 & CCNA2   Hackademy

Technical Skills

Languages:
- Intermediate: C, C++, Java, JavaScript, TypeScript, HTML, CSS, Python, Bash
- Beginner: C#, Haskell, Lisp, x86 Assembly, MATLAB

Technologies: Linux, Git, React.js, Docker, Tailwind CSS, Node.js, Flask, Express.js, MongoDB, SQL