ILONCZAI ANDRÁS

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WORK EXPERIENCE

University of Debrecen, Faculty of Informatics — Part-time
Demonstrator — September 2024 – 2025 February
- I helped the students of the Programming Languages 1,2 course to learn the C and Java programming languages
- I supported the students in understanding the material and answering questions in exercises
- I held regular consultations, providing individual help to those who needed support

Avander Software Development Kft — Hybrid (HO / Budapest)

Junior Software Developer — June 2024 - October 2024
- I worked in an agile team in four-week sprints, with daily standup meetings
- I participated in frontend and backend tasks, bug fixes and new feature development
- I gained experience in full-stack development, problem solving and teamwork

STUDIES

University of Debrecen
Bachelor of Computer Engineering — September 2021 - February 2025

Main subjects: programming languages 1,2, embedded systems, systems programming, assembly programming

Nyíregyházi Egyetem Eötvös József Gyakorló Általános Iskola és Gimnázium

Mathematics faculty — September 2017 - May 2021

Main subjects: computer science, mathematics

PROJECTS

Wattpad clone, *Private project (In progress)* — July 2025 – currently
- Building a full-stack Wattpad clone web application, with the frontend entirely developed by me using modern technologies like Angular 19 and SCSS.
- The primary objective is to gain hands-on experience and master new technologies in a real-world project, focusing on creating a robust and secure application. I'm actively developing the backend with Spring Boot (Java 17), integrating with PostgreSQL (Spring Data JPA), implementing API security (Spring Security, JWT), and utilizing Cloudinary for media management.

Job Tracker Dashboard, *Private project* — March 2025 – May 2025
- I developed a modern Kanban-based job search dashboard that allows users to track their applications, monitor deadlines, view statistics and use LinkedIn integration.
- The project uses a React frontend, Node.js (Express) backend, PostgreSQL database, Auth0 based authentication and React Query + dnd-kit based interactive interface.
- The solution supports multi-user accounts and is built with a scalable architecture.

Confectionery application, *Debreceni Egyetem* — August 2024 - February 2025
- The Cukorvirág project is a web application for a fictional confectionery shop, whose frontend was entirely developed by me using modern technologies like React and Tailwind CSS.
- The goal was to create a responsive, user-friendly ordering interface that provides a smooth connection between customers and the shop. During development, I worked closely with the backend team (Spring Boot, Java) to gain a complete understanding of how the web applications worked.

Engineering Calculator (Thesis), University of Debrecen — March 2024 - August 2024
- Built in Python using the PyQt5 library, it provides much more than simple arithmetic - it includes modules for complex mathematical functions such as differential equations, probability, statistics and logical operations.
- In my thesis, I will describe in detail the technological choices, including Python's object-oriented features, exception handling and the use of graphical libraries.
- The calculator's user-friendly interface combines several mathematical tools into a single, easily accessible application that illustrates the intersection of mathematics and programming in practical engineering tasks.

BMP generator, University of Debrecen — Feb. 2024 - May. 2024
- I have developed a data communication application in C that provides efficient data transfer using both socket and file-based methods
- The project includes a custom bitmap (BMP) image generator that visually represents the resulting numerical data
- An important element is real-time signal handling and file generation with custom BMP headers and pixel arrays
- The solution demonstrates the capabilities of low-level system programming by integrating file I/O, socket programming and bitmap image generation into a single communication protocol.

Morse Android app, University of Debrecen   Feb. 2023 - Feb. 2023

- I have developed an Android mobile app that converts text into Morse code and uses the flashlight on the device to display the code.
- Users can enter text via the keyboard or by extracting it from an image using OCR technology, making the app versatile for different input methods.
- This project combines text recognition and hardware control, enabling real-time display of Morse code, even for practical purposes.

CERTIFICATES

- **IT Specialist Python**   **ID:** DKQa-4wb2
Issued by Certiport - A Pearson VUE Business   May 2024
International Computer Drivers License - Level One (ICDL)   ID: HU000005938
Issued by: ECDL   July 2021

SKILLS, LANGUAGES, INTERESTS

- Languages: English (B2)
- Programming languages: python, Java, C, C#, C++, SQL, x86 Assembly, Matlab, SQL
- Databases: MSSQL, PostgreSQL, Oracle, MySQL
- Web development: PHP, HTML, CSS, JavaScript, Angular, React, Blazor, Tailwind CSS, TypeScript
- Tools and technologies: OpenGL, Android Studio, Azure DevOps, LabView, Microsoft Excel, Git, WPF
- Embedded systems: Raspberry Pi, Arduino
- Operating systems: Linux, Windows
- Interests: Programming, Hardware and Embedded Systems, Video Games, Anime, Reading, Sports