

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

Job Tracker Dashboard, Private project (In progress)

March 2025 – currently

- 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**

Issued by Certiport - A Pearson VUE Business

- **International Computer Drivers License - Level One (ICDL)**

Issued by: ECDL

ID: DKQa-4wb2

May 2024

ID: HU000005938

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