# ANDRÁS ILONCZAI

**Junior Full Stack Developer / Student lecturer**

Debrecen, Hajdú-Bihar, Hungary

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## WORK EXPERIENCE

**Demonstrator from Programming Languages 2** **Part-time**

*Student lecturer* Sep 2024 – Present

- My task was to help the students of the Programming Languages 2 course to learn the Java programming language.
- During the exercises, I helped the students to understand the material and answer the questions that arose.
- Holding regular consultations with students, providing individual assistance and mentoring to those who needed extra support.
- Collecting valuable feedback from students and tutors to improve and develop the course.

**Avander Software Development** **Hybrid (HO / Budapest)**

*Junior Software Developer* Jun 2024 – Oct 2024

- Participated in an Agile team, working in four-week sprints with daily standups.
- Contributed to frontend and backend tasks, including bug fixing and new feature development.
- Gained experience in full-stack development, problem-solving, and collaboration.

**Demonstrator from Programming Languages 1** **Part-time**

*Student lecturer* Feb 2024 – May 2024

- In my role as a Demonstrator for Programming Languages 1 at the University of Debrecen, I helped students understand fundamental programming concepts and languages.
- I conducted regular consultations, provided individual assistance, and collected valuable feedback to enhance the course.

**Medicor Kéziműszer Zrt.** **Debrecen, Hajdú-Bihar, Hungary**

*Standard Time Measuring Assistant* Jul 2023 – Feb 2024

- Conducted time measurement tasks to improve production efficiency.
- Worked closely with production line staff and management to streamline processes.
- Developed analytical skills and teamwork experience through data collection and reporting.

**Wolt** **Debrecen, Hajdú-Bihar, Hungary**

*Courier* Mar 2023 – Sep 2023

- Delivered orders efficiently, ensuring on-time service and customer satisfaction.
- Developed time management and customer service skills.

**TESCO** **Nyíregyháza, Szabolcs-Szatmár-Bereg, Hungary**

*Cashier* Oct 2020 – Dec 2020

- Managed cash transactions efficiently and accurately in a fast-paced retail environment.
- Improved customer service skills by handling requests and resolving issues promptly.

## EDUCATION

**University of Debrecen** **Debrecen, Hungary**

*Bachelor's degree in Computer Science Engineering* Sep 2021 – Jun 2025

- **Courses**: Calculus, Mathematical Statistics, x86 Assembly, Mathematics

**Nyíregyházi Egyetem Eötvös József Gyakorló Általános Iskola és Gimnázium** **Nyíregyháza, Szabolcs-Szatmár-Bereg, Hungary**

*High school in Advanced maths faculty* Sep 2021 – Jun 2025

- **Courses**: Informatics, Mathematics

## PROJECTS

**Engineering Calculator**

*University of Debrecen* Mar 2024 – Aug 2024

- This application, designed in Python using the PyQt5 library, offers more than simple arithmetic—it includes modules for complex mathematical functions such as calculus, differential equations, probability, statistics, and logical operations.
- The thesis covers technology choices, including Python's object-oriented features, exception handling, and graphical libraries.

- This calculator's user-friendly interface integrates multiple mathematical tools into one accessible application, demonstrating the intersection of mathematics and programming in practical engineering tasks.

**PHP Login Interface**
*University of Debrecen* Feb 2024 – May 2024
- Developed a responsive web application featuring a secure and user-friendly login form using HTML, CSS, and PHP. The form includes real-time validation for input fields, ensuring data accuracy before submission.
- Custom CSS styling provides a polished and professional UI, with smooth transitions and responsive layout adjustments for mobile and desktop users.
- The backend PHP script processes login credentials securely, authenticating users against stored data and redirecting them based on access rights.
- Designed with accessibility in mind, offering seamless navigation and interaction across all devices.

**Rock Paper Scissors Web Game**
*University of Debrecen* Feb 2024 – May 2024
- Developed an interactive Rock-Paper-Scissors game using HTML, CSS, and JavaScript.
- The game allows players to choose between rock, paper, or scissors, competing against a computer opponent with randomized choices.
- The interface includes dynamic scoring and feedback, with each match result updating player and computer scores, along with a tie counter.
- CSS animations add a hover effect to each option for an engaging user experience. This project demonstrates front-end development skills, focusing on DOM manipulation, event handling, and responsive design.

**Computer graphics**
*University of Debrecen* Feb 2024 – May 2024
- In my Computer Graphics course at the University of Debrecen, i have successfully completed these three projects, each involving complex graphical programming and interactive elements.
- Project 1 - Bouncing Circle You created a dynamic circle that moves horizontally, bouncing off window edges, with color gradients from red to green. You also added a user-controlled horizontal line and implemented color changes based on the circle's position.
- Project 2 - Bézier Curve Drawing Application This project involved creating a third-degree Bézier curve with draggable control points. You enhanced the interface with a control polygon, color customization, and features allowing users to add or remove control points dynamically.
- Project 3 - 3D Cube Scene with Camera and Lighting Here, you set up a 3D environment with a camera that rotates around a central cube and displays two additional cubes in view. You configured perspective projection and enabled camera movement along the z-axis, completing all required features.

**Systems oriented programming**
*University of Debrecen* Feb 2024 – May 2024
- Developed a data communication application in C for efficient data transmission using both socket and file-based methods.
- The project includes a unique bitmap (BMP) image generator that visually represents received numerical data. Key features include structured data handling via sockets and files, real-time signal management, and file creation with custom BMP headers and pixel arrays.
- This solution showcases capabilities in low-level systems programming, integrating file I/O, socket programming, and bitmap image generation in a seamless communication protocol.

**Embedded Systems Projects**
*University of Debrecen* Sep 2023 – Feb 2024
- Hands-on Python projects demonstrating embedded systems concepts, developed for Raspberry Pi.
- Covers practical applications of sensors, actuators, and communication protocols, showcasing both fundamental principles and advanced implementations in embedded systems.

**Java Image Scrolling Website**
*University of Debrecen* Sep 2023 – Feb 2024
- Created a Java-based application that transforms a folder of images, including nested folders, into a fully navigable website.
- This tool automatically scans directories, generates HTML pages for each image, and links them with navigation controls for seamless scrolling.
- Users can explore image galleries directly in their browsers, with intuitive forward/backward navigation.
- This project showcases expertise in Java file handling, automated HTML generation, and dynamic webpage creation, providing an efficient way to turn local image collections into a browsable web format.

**Chat application**
*University of Debrecen* Feb 2023 – May 2023
- Built a Chat application in C# using wpf.

**Basic System Monitor program**
*University of Debrecen* Feb 2023 – Feb 2023
- Developed a Python-based system monitoring tool that tracks CPU, memory, and disk usage, logging data at regular intervals.
- The tool creates daily log files, enabling users to monitor system performance over time. Users can configure the monitoring duration or retrieve real-time metrics directly to the console.
- This project demonstrates proficiency in Python scripting for real-time data collection, file management, and system resource analysis.

**Morse Android App**
*University of Debrecen* Feb 2023 – Feb 2023
- Developed an Android app that converts text into Morse code signals using the device's flashlight.
- Users can input text either through the keyboard or by extracting it from an image using OCR, making the app versatile for various input methods.
- This project combines text recognition with hardware control, allowing Morse code signaling in real-time, ideal for both practical and educational use.

## LICENSES AND CERTIFICATIONS

**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* Jul 2021

## SKILLS, LANGUAGES, INTERESTS

- **Languages**: English (Professional Working Proficiency)
- **Programming Languages**: Python, Java, C, C#, C++, SQL, x86 Assembly, Matlab
- **Web Development**: PHP, HTML, CSS, JavaScript, Angular, TypeScript
- **Tools & Technologies**: OpenGL, Android Studio, Azure DevOps Services, LabView, Microsoft Excel, Linux, Git, WPF
- **Embedded Systems**: Raspberry Pi
- **Operating Systems**: Linux, Windows
- **Interests**: Programming, Hardware and Embedded Systems, Video Games, Anime, Reading, Sports

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