BABOS DÁVID

COMPUTER SCIENCE ENGINEER

CONTACT

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Târgu Mureș, Romania

GitHub

LinkedIn

SKILLS

- Android Development
- Kotlin
- Deep Learning
- Data Science/Engineering
- Python
- Web Development
- Docker
- Linux
- Git
- SQL & NoSQL
- Unit Testing
- Robotics
- Electronics

LANGUAGES

- English
- Hungarian
- Romanian

ABOUT ME

Master's student in Intelligent Control Systems with a background in deep learning, robotics, and mobile development. Experienced in building practical solutions through projects such as assistive technologies and Android applications. Curious, motivated, and adaptable, I enjoy both teamwork and independent challenges, always striving to expand my technical expertise.

WORK EXPERIENCE

Hanko Medico 2025 - PRESENT

Full-stack Developer

- Developed and deployed a web-based healthcare app for managing patient and therapist results using Angular and PHP, hosted on simply.com.
- Designed secure data handling and intuitive interfaces for uploading, reviewing, and sharing results between patients and therapists.
- Served as the primary point of contact for stakeholders.

3 Screen Solutions 2025 SUMMER

Android Intern

- Mentored and collaborated in a Scrum-like environment with daily meetings, teamwork, and Kanban boards.
- Used GitLab with feature branches and mentor-led code reviews.
- Developed an Android habit tracker app in Kotlin using Android Studio with MVVM, Use Cases, Repositories, Coroutines, and Retrofit.
- Helped define app-wide guidelines to ensure a consistent user experience and code structure.

Codespring 2023 SUMMER

AI / Machine Learning Intern

- Developed a four-legged Dogzilla S1 robot that autonomously learned to stand upright using TensorFlow-based Reinforcement Learning in an agile Scrum environment.
- Implemented and refined AI-driven standing behaviors through iterative training cycles, collaborating closely within the team to improve stability and control.

EDUCATION

Master of Intelligent Control Systems 2025 - PRESENT

Sapientia EMTE

Bachelor of Computer Science Engineering 2021 - 2025

Sapientia EMTE

Grade I Pedagogy Module 2022 - 2025

Sapientia EMTE

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RESEARCH

SapiSAT CubeSat engineering project 2025 - PRESENT

- Contributing to a student satellite (CubeSat) engineering project in a cross-functional university team with regular weekly coordination.
- Helping design and implement the onboard communication system and embedded software in C on STM32 microcontrollers, following safety-focused development practices.
- Supporting reliable internal communication and data handling between satellite subsystems to enable autonomous operation in orbit

Deep Learning for Brain Tumor MRI 2024 - 2025

- Conducted a brain tumor segmentation research project in Python using deep learning on medical imaging data with NumPy and OpenCV, achieving strong segmentation accuracy.
- Applied modern machine learning practices and tools (advanced loss functions, training optimization, experiment tracking) with a Python-based stack to improve model performance and reliability.

From Code to Canvas 2024 - 2025

- Designed an interdisciplinary project where AI-based images are processed and drawn by a robotic arm using CMYK felt-tip pens.
- Implemented image processing pipelines (shading via hatching, contour extraction, straight-line vector graphics) to generate robot-ready drawings.
- Demonstrated the artistic and technical potential of blending software, computer vision, and robotics, recognized with a 3rd place conference prize and an Accenture special award.

HACKATHONS

AI-Enhanced Student Learning Platform 2025

- Co-built “The Knowledge Vault” in a team of three: a mini Moodle-like platform where students create and share structured course notes to support community-based learning, developed in Python (FastAPI) with a React frontend and deployed in 48 hours at a hackathon.
- Integrated a context-aware AI chatbot that answers questions based on the currently opened note, acting as a personal teaching assistant for each course.
- Evaluated usability and student acceptance using the TAM model and open-ended feedback, revealing promising results and clear directions for further development.
- Presented at the 2025 Scientific Student Conference and nominated for the 2027 National Scientific Student Conference.

Europe Map Quiz and AI Art Platform 2024

- Participated in a 48-hour hackathon as part of a three-person team to build a web app that helps students learn fun facts about European countries through an interactive map, images, and quizzes.
- Enabled students to generate a personalized drawing-style image at the end of the session, based on what they learned, using a custom trained image-to-image AI model.

LinkHub – Social Travel Review App 2023

- Co-developed LinkHub, an Android social app built in Android Studio with Java and Firebase, where travelers share reviews and photos of recently visited places.
- Enabled users to discover popular and relevant spots in new cities through community-driven ratings and posts.
- Created in a team of three during a 24-hour hackathon and received a special award from Endava.

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PROJECTS

AI the Artist – Creative Image Stylization App 2024 - 2025

- Built "AI the Artist" (StyleApp), a cross-platform solution (React web and Android) that lets users turn everyday photos into artwork using Neural Style Transfer.
- Enabled an open style system where users can add their own favorite paintings as styles and share generated images with the community.
- Recognized with top academic honors: bachelor thesis grade 10, 1st place at the 2024 Scientific Student Conference, an Accenture special award, and a presentation at the 2025 National Scientific Student Conference.

Personal DevOps Playground 2023 - PRESENT

- Built a self-hosted environment using Docker and Docker Compose to run multiple applications on a home server.
- Managed the server remotely via SSH, enabling flexible monitoring and maintenance outside the local network.
- Hosted various services such as game servers, media streaming, and databases (MongoDB, PostgreSQL) to support learning and real-life use cases.

INTERNATIONAL EXPERIENCE

Erasmus+ Semester at Budapest University of Technology and Economics 2023 - 2024

- Spent one semester as an Erasmus+ exchange student at BME, focusing on Deep Learning and Computer Networks.
- Strengthened technical skills in AI, PyTorch, neural networks, CCNA-level networking, and Android development.
- Built an international network by collaborating with students from diverse cultural and academic backgrounds.

Erasmus+ Android Development Training (High School) 2019 SUMMER

- Received early training in Android development during high school through a 3-week Erasmus+ program at Alfatraining, covering Java, XML, and Android Studio.
- Used the experience to build and test mobile apps, including a social media application, and to keep improving Android skills over the following years.

Erasmus+ Electronics Practice (High School) 2018 - 2019

- Joined a high school Erasmus+ electronics program and summer camp in Hungary, combining classroom practice with project-based learning.
- Developed basic electronics and teamwork skills by programming microcontrollers, measuring circuits, and assembling simple PCB projects with peers.

EXTRACURRICULAR & INTERESTS

- Co-coordinated a 50-member student team for annual university Student Days events and continue to be involved in organizing activities.
- Enjoy bouldering, hiking, and camping, regularly spending time outdoors and in nature.