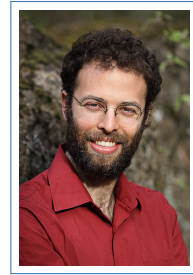


Ido Akov

Computer scientist and software engineer specializing in signal processing. Multidisciplinary, creative, and dedicated.

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Education

- 2022–2024 **M.Sc.**, *Aalto University*, Helsinki
Master's programme in Computer, Communication and Information Sciences
Major: Acoustics and Audio Technology, minor: Speech and Language Technology
- Applied deep learning to tasks like offensive language and emotional speech recognition
 - Developed real-time audio plugins in C/C++
 - Designed machine and reinforcement learning algorithms for predictive modeling and decision making
 - Implemented autonomous robot tracking using sensor fusion
- 2018–2021 **B.Sc.**, *Hebrew University*, Jerusalem
Bachelor's programme in Computer Science
- Relevant courses: Infinitesimal Calculus, Discrete Mathematics, Linear Algebra, Data Structures, Algorithms, Operating Systems, Computational Models, Databases, Machine Learning
- 2011–2014 **B.Mus.**, *Academy of Music and Dance*, Jerusalem, *summa cum laude*
Bachelor's programme in Piano Performance

Master thesis

- title *Ultrasonic echolocating spatial super hearing system*
- supervisors Prof. Ville Pulkki, advisor: Leo McCormack
- description The thesis presents the bat-mic, a real-time echolocation system for spatial navigation in low-visibility conditions, using extended super hearing technology. MATLAB simulations show its effectiveness in approaching boundaries and finding equidistant points between two walls. A real-time proof-of-concept device is implemented as a user-interactive VST plugin in C/C++.

Experience

- 2023–2024 **Research Assistant**, *Aalto Acoustics Lab*, Helsinki
- Researched super-hearing technology capabilities
 - Measured frequency-response and directivity of hardware components
 - Created MATLAB scripts for the automation of impulse-response analysis

- 2022 **Freelance arranger**, *Simply (formerly Joytunes)*, Tel-Aviv
 - Contributed to the Simply Piano app
 - Reviewed other arrangers' contributions
- 2019-2021 **Lecturer**, Israel
 - JAIS (Jerusalem American International School)
 - Jerusalem Academy of Music and Dance
 - Be'er Sheva Conservatory
 - Naggat school of Art and Society

Prizes

- 2022–2024 **Finland Scholarship**, *Aalto University*, Helsinki
Awarded to promising Master's degree candidates
- 2023 **Incentive Scholarship**, *Aalto University*, Helsinki
Awarded for completing 60+ ECTS credits in the first year

Languages and citizenship

- English Native
- Hebrew Native
- German B1 (intermediate)
- Work EU Citizen, American Citizen
- Eligibility

Programming languages and computer skills

- Python **Data analysis, machine learning and optimization**
NumPy, SciPy, PyTorch, OpenCV, scikit-learn, pandas, seaborn, gym, pytest
- C/C++ **Real-time systems, object-oriented and concurrent programming**
STL, libc, Intel MKL, OpenMP, CMake, Make, JUCE, SAF
- MATLAB **Modeling, simulation and computational mathematics**
Simulink, DSP System Toolbox, C-Matrix API, MEX files
- SQL **Relational database management and querying**
PostgreSQL
- Linux **Script automation and software development for UNIX systems**
Bash, SSH, Vim, Valgrind, Make, Docker, QEMU
- Git **Version control, branch management, and collaboration on projects**
GitHub, CI/CD integration, merge conflict resolution

Volunteer + Personal

- Gam vegan Tandem cycling with visually-impaired people (together)
- Music Active classical pianist and composer
- Blog-writing <https://ikavodo.github.io/blog/>