

Hungarian Bionic Vision Center Artificial Intelligence Lab Pázmány Péter Catholic University

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HBVC IN A NUTSHELL

- University lab
- Located in Budapest, Hungary
- 4 core members + students + blind collaborators
- Background in computer science

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letseeapp.com

Main focus:

Computer vision to assist the visually impaired

- research; SOTA approaches; prototypes
- efficient implementation: smart-phone
 - LetSeeApp (AppStore, Google Play)

Phone-based:

- No special hardware or extensions needed
- Standard accessibility via VoiceOver/TalkBack
- Regular beta testing



EXPERTISE AND VALUE PROPOSAL

■ Research in computer vision

- deep-learning & machine learning expertise
- interpretation of spatiotemporal events and user interaction, human-in-the-loop
- real-time digital twin representation of 3D environment

■ Application development

- iOS & Android
- 3 publicly available functions
- +4 in active development

■ Results

- publications (Q1/Q2 + conferences)
- Cybathlon 2024 winner
- grants (15+ years)
- patent for color recognition: pending

■ Partnership with

- Hungarian Federation of the Blind and Partially Sighted
- Max Planck Institute for Biological Intelligence

■ Research collaboration network (potential project partners):

- Universidad Autónoma de Madrid, Spain
- Université de Bordeaux, France
- Semmelweis University, Budapest, Hungary
- Eötvös Loránd University, Budapest, Hungary
- Sorbonne University, Paris, France

