

# Unsomia

## Enhanced diagnosis for insomnia

Insomnia is characterized by difficulty in falling asleep, difficulty in staying asleep, or early awakenings. Insomnia can be independent or co-occur with a variety of psychiatric disorders, such as depression and anxiety, or other disorders like neurological, neuroendocrine, and cardiovascular diseases. Besides that, insomnia has detrimental effects on cognitive functioning, driving safety, and work productivity. The prevalence of insomnia varies depending on its definition and can be as high as 50-60% of a total population. It is surprisingly underdiagnosed and undertreated given its high prevalence, disease burden, and significant costs to both the individual and society. This is largely due to the lack of valid and reliable diagnostic tools; the current diagnosis is based on self-reported two-weeks sleep/wake diary, actigraphy recordings, and/or validated questionnaires that suffer from inaccuracies, subjectivity, and biases. We at Unsomia will provide next-generation artificial intelligence-driven approach for early detection and risk assessment of insomnia, which will be based on valid physiology-based clinical evaluation.

### **Timo Leppänen, Ph.D.,**

Docent, Founder

Timo and his research group have several years of experience in developing wearables and deep learning-based approaches for sleep medicine.



### **Johanna Löfblom, M.Sc.,**

Co-founder

Johanna has a multisector experience in product and service development ranging from wearables to HealthTech & systems to Building Technology.

### **Shayan Ahmad Khan, B.Sc.,**

Co-founder

Shayan has several years of international experience ranging from industrial to R&D projects. He is currently in the final year of his master in biomedical engineering.



### **Jussi Malila, BBA,**

Jussi has 5+ years of experience from B2B account management and customer acquisition. Graduating as M.Sc. in health economics in spring 2021.

**SPARK VALUE:** We hope the SPARK program will help us to translate our invention to clinical practice when diagnosing insomnia. Through SPARKS network we hope to find partners having expertise in mobile app development, marketing, and sales.