Baosheng James Hou

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Skills

Eye tracking
Machine learning
Virtual Reality
Brain-Computer Interface
Experimental Design
Unity, C#, Python

Awards

Best Paper Award
COGAIN 2020 Conference
Jun 2020

First place, Start-up weekend
Future Entrepreneur of Denmark
May 2017

Gold medal
International Genetically Engineered Machines (iGEM) Competition
Nov 2016

Profile

PhD student leveraging eye tracking, machine learning, and an experimental approach to research and improve eye-head interaction techniques.

Google Scholar, LinkedIn

Education

PhD. Computer Science, Lancaster University
Jan 2021 – current

- Leverage eye tracking and machine learning to classify gaze-driven head movement from gestural head movement.
- Presented publication at CHI'23
- Co-supervised bachelor students working with EOG glasses.
- Led 25-person workshops as teaching assistant for an undergraduate HCI course.

MSc. Biomedical Engineering, Technical University of Denmark
Sep 2015 – Dec 2019
Thesis:

- Combined eye tracking and brain-computer interface to enable hand-free target acquisition.
- Implemented deep learning to classify motor-imagery inputs.
- Presented at COGAIN 2020 and received Best Paper Award.

Team Competition:

- Interdisciplinary, student-led synthetic biology team.
- Prototyped bioinformatics software.
- Organized meetings and team-building activities.
- Gold medal at the international Genetically Engineered Machines (iGEM) competition (Boston, 2016).

BEng. (honours) Biomedical Engineering, University of Auckland
Mar 2012 – Jul 2015

Language

Chinese - native
English - professional
Danish - elementary

Work Experience

Research Assistant, Technical University of Denmark

Oct 2020 – Jan 2022

Developing visual aids in extended reality:

- Analysed eye tracking data to improve calibration.
- Implemented eye tracking experiment in Unity.
- Collaborated with neuropsychologist and occupational therapists.
- Conducted clinical experiment with 20+ visually impaired patients.
- Presented at Tech Expo events.
- Assisted supervision of MSc. students in eye tracking projects.

Research assistant, Auckland Bioengineering Institute

Nov 2013 – Feb 2014

Tracked and animated shoulder movement using motion sensors.

Research assistant, Auckland Bioengineering Institute

Nov 2012 – Feb 2013

Trained machine learning models to predict tissue deformation.