XIJIA WEI

+86 16601515668 | +44 7754106664 | weixijia@outlook.com

EDUCATION

M.Sc Artificial Intelligence — Nov. 2018
University of Edinburgh — Edinburgh, UK

- Courses: Machine Learning and Pattern Recognition; Big Data Analysis; Natural Language Processing; Computer Vision; Human Interaction Design;
- Research: End-to-End ML Tracking System based on Smartphone Multisensory Data; Applied Machine Learning; Multisensory Systems; Multimodal Machine Learning

B.Eng (Honours) Electronics and Electrical Engineering — Jul. 2017
University of Edinburgh — Edinburgh, UK

- Courses: Wearable Device; Signal Processing; Analogue/Digital Circuit Design; Microelectronics; Power System Design; Bioinformatics
- Research: Indoor Positioning based on Smartphone Sensors using Machine Learning
- Awards: International Student Scholarship (£2000 per annum)

SKILLS

- Machine Learning & Pattern Recognition
- Multimodal Sensing System Design
- Multimodal Machine Learning
- Cyber Physical System Design
- Data Analyse and Processing
- Algorithms Design
- C/JAVA/Python/Matlab/VHDL Programming
- Electronics/Electrical System Design
- Analogue/Signal Circuit Design
- Human Computer Interaction
- English/Chinese
- Violin

PUBLICATIONS

Journal Paper — Nov. 2021
Sensors2021 Volume 21

- "Sensor-fusion for Smartphone Location Tracking using Hybrid Multimodal Deep Neural Networks" Xijia Wei, Zhiqiang Wei and Valentin Radu, Sensors2021

Conference Paper — Oct. 2021
International Conference on Indoor Positioning and Indoor Navigation (IPIN) 2021 — Barcelona, Spain

- "MM-Loc: Cross-sensor Indoor Smartphone Location Tracking using Multimodal Deep Neural Networks" Xijia Wei, Zhiqiang Wei and Valentin Radu, IPIN2021

Conference Paper — Oct. 2019
International Conference on Indoor Positioning and Indoor Navigation (IPIN) 2019 — Pisa, Italy

- "Calibrating Recurrent Neural Networks on Smartphone Inertial Sensors for Location Tracking" Xijia Wei, Valentin Radu, IPIN2019

Conference Paper — Sep. 2018
UK Mobile, Wearable and Ubiquitous Systems Research Symposium (MobiUK) 2018 — Cambridge, UK

- "End-to-End Machine Learning for Smartphone-based Indoor Localisation and Tracking using Recurrent Neural Networks" Xijia Wei, Valentin Radu, MobiUK2018

TALKS

Machine Learning Session (online presentation) — Nov. 2021
International Conference on Indoor Positioning and Indoor Navigation (IPIN) 2021 — Barcelona, Spain

- "An end-to-end multimodal deep neural network based smartphone cross-sensor tracking system"

Special Session of Machine Learning Oct. 2019
International Conference on Indoor Positioning and Indoor Navigation (IPIN) 2019 Pisa, Italy
- "How recurrent neural network performs like pedestrian dead reckoning for indoor positioning"

Machine Learning Session Sep. 2018
UK Mobile, Wearable and Ubiquitous Systems Research Symposium (MobiUK) 2018 Cambridge, UK
- "An infrastructure-free smartphone locationing system using inertial sensor data"

WORK EXPERIENCE

AI Algorithm Researcher (remote) Nov. 2018 - Present
Ubiquitous AI Lab *@University of Sheffield & Edinburgh* Beijing, China
- Develop an end-to-end multimodal deep learning network architecture for smartphone sensor-fusion tracking system;
- Responsible for multimodal sensing system design, conceptualisation, data curation, formal analysis, methodology analysis, software development and publication.

Fintech Department Manager Mar. 2019 - Present
CNPC *@Headquarters* Beijing, China
- In charge of the FinTech Research Group;
- Director of Risk Management System Group;
- Director of Commercial Paper Exchange Platform Development Team.

AI Software Researcher Oct. 2016 - May 2017
Scotland Microelectronics Centre *@University of Edinburgh* Edinburgh, UK
- Develop an end-to-end neural network navigation system using the smartphone sensor-fusion dataset of WiFi fingerprints and magnetometer samplings;
- Design magnetic-based neural networks navigation system.

Embedded Software Engineer Jun. 2016 - Aug. 2016
GUOZI Robots Automation Research Lab *@University of Zhejiang* Hangzhou, China
- Optimise the inspection robots chassis control system in terms of stability and efficiency using machine learning techniques;
- Real-time robot automation system testing.

Mobile Software Engineer Mar. 2016 - Dec. 2016
Institute for Digital Communications *@University of Edinburgh* Edinburgh, UK
- Human activities data collection and processing based on wearable devices;
- Develop a human activity recognition machine learning system based on the IMU sensor dataset collected from foot-mounted wearable devices;
- Responsible for data gathering, processing, algorithm design, model building and online testing.

Digital Security System Intern Dec 2015 - Jan 2016
Bank of England *@Headquarters* London, UK
- Digital trading system development;
- Investment strategy;
- Risk management.