

XIJIA WEI

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EDUCATION

M.Sc Artificial Intelligence
University of Edinburgh

Nov. 2018
Edinburgh, UK

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

B.Eng (Honours) Electronics and Electrical Engineering
University of Edinburgh

Jul. 2017
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)

SKILLS

- Machine Learning & Pattern Recognition
- Mobile 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

Sensors Special Issue "Multisensors Indoor Localization"

Nov. 2021
(Under review)

- "Sensor-fusion Location Tracking System using Hybrid Multimodal Deep Neural Network"
Xijia Wei, Zhiqiang Wei and Valentin Radu, Sensors

Conference Paper

International Conference on Indoor Positioning and Indoor Navigation (IPIN) 2021

Nov. 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

International Conference on Indoor Positioning and Indoor Navigation (IPIN) 2019

Oct. 2019
Pisa, Italy

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

Conference Paper

UK Mobile, Wearable and Ubiquitous Systems Research Symposium (MobiUK) 2018

Sep. 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)

International Conference on Indoor Positioning and Indoor Navigation (IPIN) 2021

Nov. 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

Beijing, China

- Invest on an end-to-end multimodal deep learning network architecture for sensor-fusion smartphone based location tracking system
- Lead research group in dataset collection, algorithm design, model optimisation and paper writing

Fintech Department Manager

Mar. 2019 - Present

CNPC @Headquarters

Beijing, China

- 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 indoor positioning navigation system based on indoor WiFi received signal strength and electromagnetic distribution
- Design electromagnetic distribution features based artificial neural network
- Develop smartphone built-in sensors based indoor positioning navigation App

Embedded Software Engineer

Jun. 2016 - Aug. 2016

GUOZI Robots Automation Research Lab @University of Zhejiang

Hangzhou, China

- Optimise the stability and efficiency of the control system of the chassis of the inspection robots
- Improve system's efficiency of 33% by self-clustering operating situations

Mobile Software Engineer

Mar. 2016 - Dec. 2016

Institute for Digital Communications @University of Edinburgh

Edinburgh, UK

- Movement data collection and processing based on wearable devices
- Instant user movement prediction AI system development. Clustering between walking, running, jumping, swimming and related complex non-periodical movements.
- Deep neural network and convolutional neural network models based machine learning algorithm development and performance test
- Improve the recognition accuracy from 60% to 97.4%

Digital Security System Intern

Dec 2015 - Jan 2016

Bank of England @Headquarters

London, UK

- Digital trading system development
- Investment strategy
- Risk management