

Fupin Yao

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Industrial Experience

Software Engineer, WorkStream

May 2021 - Present

Developed a parser for resumes with known templates

- Invented a formats-based method, got nearly 100% accuracy.
- Developed a template engine using YAML configuration files so that no codes are required for new templates

Developed a parser for resumes without templates

- Invented a way to label text classification dataset without human effort
- Invented a heuristics plus machine learning based method, got 88% accuracy.
- Deployed the parser to a micro-service container with AWS SQS, AWS DynamoDB and Jenkins.

Software engineer and CEO, Shulaishuwang Ltd., Wuhan, China.

2015 Apr - 2015 Oct

- Worked as a android and back-end engineer and CEO of a 8-people team
- Contributed a large portion of android client development and server development.
- Released an android application for connecting people from the same hometown. [Overview](#) [Download](#).

Software engineer and CEO, Shulaishuwang Ltd., Wuhan, China.

2015 Apr - 2015 Oct

- Worked as CTO in a start-up internet company and was in charge of a 10-engineer team.
- Contributed a large portion of android client development, released an android application for college students, like Amazon. [Overview](#) [Download](#).

Education

2021 May - 2022 June (expected)

MBA & Full-Stack Coding Camp

Westcliff University, CA, USA

2017 Jan - 2019 Jan

Master student in Computer Engineering

Purdue University, West Lafayette, IN, USA

Area of Research: Computer vision and deep learning

2011 Sep - 2016 June

B.S. in Computer Sci. and Tech. Department

Huazhong Univ. of Sci. and Tech., Wuhan, China

Research Experience

Ph.D. Researcher, iFlyTek-Surrey Joint Research Centre on Artificial Intelligence,UK

2019 Oct - 2021 Jan

- Proposed a new and realistic setting, cross-domain few-shot learning and designed a benchmark for this setting.
- Proposed a contrastive learning based approach and a rotation based approach and our methods improve the accuracy from 60% (the baseline) to 70%.
- Published two paper based on the above results.

Research assistant, Purdue University, USA

2018 Jan - 2019 Jan

- Designed and implemented a new type of spherical convolutional layer, a new type of spherical pooling layer and convolutional neural networks for 3d models classification and retrieval.
- Achieved superior accuracies over the state of the art and publish a paper in ICLR.

Research assistant at NTU, Singapore

2016 July - 2016 Dec

- Proposed a new research topic: grasping object in a way like humans
- Designed and implemented a novel end-to-end convolutional neural network for object detection and grasping part detection and achieved high accuracy. The visual info is used for robot grasping.
- Published a paper based on the above result.

Skills

Machine learning: Expert in few shot learning, meta learning, familiar with GNN, VAE, explainable AI, supervised learning, self-supervised learning, GNN, transformers.

Math: Good at linear algebra, probability, calculus. Know stochastic process and optimization.

Coding: Has several years experience as a software developer, released several android apps
Proficient in PyTorch, Tensorflow, Keras, Java, python, PHP, Git, Docker, MySQL, Condor and Android.
Familiar with C/C++, HTML, JavaScript, Typescript, React, Ruby & Rails, Node.js & Express, Spring Boot, Django, MatLab, OpenCV, AWS, GCP and Colab
Know hadoop, MapReduce
Language: Proficiency in English (IELTS 6.5 and TOFEL 92) and Mandarin (native)

Publication

- Min Liu, **Fupin Yao**, Chiho Choi, Sinha Ayan, Karthik Ramani. "Deep Learning 3D Shapes Using Alt-azimuth Anisotropic 2-Sphere Convolution" 7th International Conference on Learning Representations. (**Top conference in deep learning**)
- Thalmann, Nadia Magnenat, Li Tian, and **Fupin Yao**. "Nadine: A Social Robot that Can Localize Objects and Grasp Them in a Human Way." Frontiers in Electronic Technologies. Springer, Singapore, 2017. 1-23. (**Responsible for object-recognition part**)
- **Fupin Yao** "Cross-domain Few-shot Learning with Unlabelled Data" [Arxiv, pre-print](#).
- **Fupin Yao** "Machine learning with limited data" [Arxiv, pre-print](#).

Awards

- Recipient of the Student Travel Grant of IEEE Automatic Face and Gesture Recognition(2017)
- Second Prize in Huawei Cup intelligent design contest(2014)
- Third Prize in China Internet business plan contest(2013)
- 1985 Alumni scholarship,HUST(2012)
- Outstanding Student Scholarship, HUST (October, 2012)