JINGHUA YAN

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Education

University of Utah	**Aug. 2021 –**
Doctor of Philosophy in Computer Science	*Salt Lake City, USA*

University of Glasgow	**Sep. 2018 – Sep 2019**
Master of Science in Software Engineering	*Glasgow, Scotland*

with Distinction, GPA 20.5/22

Beijing Foreign Studies University	**Sep. 2014 – July 2018**
Bachelor of Arts in Spanish	*Beijing, China*

GPA: 87.1/100

Experience

ByteDance	**August 2020 – July 2021**
Computer Vision Engineer Intern	*Beijing, China*

Face Anti-Spoofing

- Updated Face Anti-spoofing models for attendance management (with higher performance and **20x less FLOPs**);
- Developed and quantized Face Anti-spoofing models for phone unlock for *Smartisan R2*;
- Developed a data collection tool on iOS and Android devices for Face Anti-spoofing models.

Face Recognition

- Added functionalities for **distributed model parallel training** and **self-supervised contrastive learning** to an internal code framework for face recognition;
- Developed Face Recognition models for faces occluded by masks.

Other

- Achieved **1st place** in ACM Multimedia 2021 Grand Challenge of Robust Logo Detection.

FunPlus	**October 2017 – May 2018**
NLP Knowledge Engineer Intern	*Beijing, China*

- Extracted rules to improve the CN-ES-EN dictionary and the *term* library of the built-in translation engine of game *King of Avalon*
- Evaluated the quality of machine translation of players' chat logs in the game;
- Reported and corrected translation errors.

Projects

Acceleration of GNN models with GraphSAGE as a Case Study	**September 2021 - Present**

- Measured performance of GNN model GraphSAGE on PyG and DGL with dense and sparse graph representations.
- Plan to implement highly efficient SpMM operations to accelerate training of GraphSAGE.
- Plan to apply the new SpMM to more GNN models, e.g. GCN and GAT for further study.

Distributed Parallel Flowshop Scheduling in *YewPar*	**September 2019**

- Implemented a Branch & Bound algorithm for the Flowshop Scheduling Problem (FSP) in YewPar, a parallel combinatorial search framework with four search skeletons (*Sequential*, *Stack-stealing*, *Budget* and *Depth-Bounded*).
- Systematically measured the parallel performance of the implementation using 23 standard FSP instances.

iCasa: An Online Store for Electronic Devices	**April 2019**

- Built the web application iCasa for online shopping using Django as middleware and SQLite as database.
- Integrated Facebook login API and Google Map API in the web application.
- Deployed the project on *pythonanywhere*.

TopTrumps: A Card Game	**February 2019**

- Built TopTrumps, a web browser based puzzle game using the DropWizard microservice framework and PostgreSQL.
- Responsible for backend and frontend development of the game.

Technical Skills

Languages: Python, C++, Shell Script, Java, JavaScript

Developer Tools: Git, XCode, Android Studio, OpenCV

Frameworks: PyTorch, TensorFlow

Honors & Awards

Masters Class Prize (Top 1) by University of Glasgow, awarded in November 2019.

Outstanding Graduate Award (Top 10%) by Beijing Foreign Studies University, awarded in June 2018.

BOCO Academic Scholarship (Top 5%) by BOCO Corporation, awarded in January 2018.

First Prize Scholarship (Top 5%) by Beijing Foreign Studies University, awarded in January 2017.