George Pu

CV

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Experience

July 2021 — present
Software Developer/Engineer I, *Amazon*, Seattle
Built software to help stop bad actors on the Amazon Store.
- Automated bad actor investigation case creation, saving 2 hours of investigator time per week.
- Onboarded ML models to SageMaker, saving >184 hours annually of data scientist effort retraining models and performing batch inference.
- Designed and implemented an offline graph query execution engine that has helped enforce >$500,000 sales on Amazon.

Jan 2018 — May 2021
Research Assistant, *NSF Center for Big Learning*, Gainesville
Performed basic research in the fields of deep learning and artificial intelligence.
- Authored 2 papers published at top conferences.
- Funded for portions of my junior year and the entirely of my senior year.

May 2020 — Aug 2020
Software Developer/Engineer Intern, *Amazon*, Virtual (Florida)
Invented a new service that gates when seller debts are charged.
- Designed a new dashboard capable of adding/removing charge overrides.
- Documented use of new technologies to help team with future development.

May 2019 — Aug 2019
Software Developer/Engineer Intern, *Amazon*, Seattle
Engineered an API to selectively display Marketplace transactions stored in DynamoDB.
- Cut time needed to debug seller tickets by >50% through the creation of a new dashboard.
- Implemented pagination enabling the service to handle >100,000 items.

Sep 2017 — Nov 2018
Research Volunteer, *University of Florida*, Gainesville
Performed applied research in the fields of mathematical biology.
- Helped fit multi-compartment epidemiological models to Leishmaniasis data.

Education

Aug 2017 — May 2021
B.S. Computer Science, *University of Florida*, Gainesville, 3.8/4.0
Minor in Mathematics

Publications

* Equal contribution

Dec 2021
Seeing Through Walls: Real-Time Digital Twin Modeling of Indoor Spaces.
George Pu, Paul Wei, Amanda Aribe, James Boultinghouse, Nhi Dinh, Fang Xu, Jing Du.
Winter Simulation Conference.

Mar 2021
Client and Server Averaging for Federated Learning.
George Pu, Yanlin Zhou, Dapeng Wu, Xiaolin Li. *arXiv:2103.11619*.

Dec 2020
Communication-Efficient Federated Learning via Dataset Distillation.
Yanlin Zhou*, George Pu*, Xiyao Ma, Xiaolin Li, Dapeng Wu.
NeurIPS Workshop on Scalability, Privacy, and Security in Federated Learning (SpicyFL).

Sep 2020	**Distilled One-shot Federated Learning.**
	Yanlin Zhou*, George Pu*, Xiyao Ma, Xiaolin Li, Dapeng Wu. *arXiv:2009.07999.*
Nov 2019	**Adaptive Leader-Follower Formation Control and Obstacle Avoidance via Deep Reinforcement Learning.**
	Yanlin Zhou*, Fan Lu*, George Pu*, Xiyao Ma, Runhan Sun, Hsi-Yuan Chen, Xiaolin Li. *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS).*

Honors & Awards

Feb 2020	JP Morgan Best Hack for Disaster Relief	*SwampHacks VI*
Aug 2019	University Scholars Program	*University of Florida*
Feb 2018	Infinite Energy Best Hack	*SwampHacks IV*

Teaching

Spring 2021	Teaching Assistant for CIS4930 Natural Language Processing under Peter Dobbins
Fall 2020	Teaching Assistant for COT3100 Discrete Structures under Peter Dobbins
Spring 2020	Teaching Assistant for CIS4301 Information and Database Systems 1 under Peter Dobbins

Personal Projects

Feb 2020	**DizViz**, *VR, Google Cloud*
	Developed a system for creating 3D models of disasters using a pipeline of Google Cloud functions for scraping images from social media.
	○ Won JP Morgan Best Hack for Disaster Relief out of 118 other teams at SwampHacks VI.
Oct 2019	**Time Tracker**, *React, Google Cloud*
	Built a single page web application using React to display time tracking data stored in Cloud Firestore.
Oct 2018	**Text Style Transfer**, *PyTorch, Flask*
	Created a website that applied machine learning research to generate sentences with the content of one sentence and the style of another.
Feb 2018	**OpenDoors**, *PyTorch, Android*
	Developed an Android app that assists visually impaired individuals find doors by training an >80% accurate neural network on a custom dataset of interiors.
	○ Won Infinite Energy Best Hack out of 79 other teams at SwampHacks IV.

Technical Skills

Language:	■■■■□	Java
	■■■□□	JavaScript
	■■■■■	Python
	■■□□□	SQL
	■■■□□	TypeScript
Framework:	■■■■□	PyTorch
	■□□□□	React

■ □ □ □ □   TensorFlow

Other: ■ ■ ■ □ □   AWS

■ □ □ □ □ basic knowledge   ■ ■ ■ □ □ extensive project experience

■ ■ □ □ □ intermediate knowledge with some project   ■ ■ ■ ■ □ deepened expert knowledge

           experience   ■ ■ ■ ■ ■ expert / specialist

Interests

Artificial   Deep Learning, Machine Learning, Reinforcement Learning
Intelligence

Robotics   Navigation