George Pu

CV

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Education

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

Experience

July 2021 —
present
Software Developer/Engineer I, *Amazon*, Seattle
- Automated buyer/seller case creation, saving 2 hours of investigator time per week.
- Created new prediction system for data scientists to deploy ML models.
- Designed a ML model training system in collaboration with scientists in and outside my team.

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 through 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.

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).

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

Basic	Intermediate	Advanced
C, C++, React, TensorFlow	Java, JavaScript, SQL	Python, PyTorch

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*