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Suhas Raja

in/suhasraja

Milwaukee, WI (US Citizen)
github.com/Suhas7

Education

The University of Texas at Austin — Austin, TX
B.S. in Electrical and Computer Engineering — GPA: 3.92/4.00
B.S.A. in Mathematics & Minor in Economics — *08/2017 – 12/2020*
Scholarship: Gail and Howard Neal Endowed Scholarship in Electrical Engineering
Key Coursework: – Data Science Principles & Lab – Computer Architecture – Stochastic Processes – Multicore Computing – Distributed Systems – Game Theory

Publications

"Individualized Mutual Adaptation in Human-Agent Teams"
by H. Li, T. Ni, S. Agrawal, F. Li, S. Raja, et.al. *Accepted in IEEE Transactions on Human-Machine Systems Journal*

"Adaptive Agent Architectures for Realtime Human Agent Teaming"
by Tianwei Ni, Huao Li, Siddharth Agrawal, Suhas Raja, et. al. *Published in AAAI PAIR Workshop, 2020*

"Programming Method to Optimally Select Power Distribution System Reliability Upgrades"
by S. Raja, Brian J. Pierre, and Bryan Arguello *Published in IEEE Open Access Power and Energy Journal, 2021*

Experience

Amazon Robotics, Blink Firmware | Embedded Software Development Engineer — *06/2021 – Present*
- Developing firmware to support cloud-connected home security cameras. | *C*
- Working with team of 2 to adapt 65000 line of codebase to common platform and new device architecture.

Carnegie Mellon Robotics Institute, Sycara Lab | Research Intern — *05/2020 – 09/2020*
- Researched Reinforcement Learning and Game Theory for human-agent teaming in real-time strategy. | *Python*
- Created AI mechanisms to navigate cooperative & adversarial multi-agent interactions with humans or robots.

The Walt Disney Company | Machine Learning & Data Science Intern — *05/2019 – 08/2019*
- Researched predictive software analytics models for over 1600 Disney services. | *Python, SQL*
- Designed realtime distributed analytics dashboard using AppDynamics dependencies & metrics.

Sandia National Laboratories | Infrastructure Optimization Research Intern — *06/2018 – 10/2018*
- Formulated and published dynamic model to optimize power grid upgrade selection. | *Python, C++*
- Improved model runtime efficiency & scalability by over 74% for complex power systems.

Projects

FlickBoard | *Personal Project* — *05/2021 – Present*
- Built an intelligent and accessible directional keyboard on ATmega32u4 chip. (C++)
- Adapting NLP and neural edge methods to drive input correction algorithm and inform interface design.

PeerNet | *Lead Developer, Founder* — *08/2020 – Present*
- Designing social platform facilitating peer tutoring & course-specific forums for college campuses.
- Managing team of 8-12 for 5 months to design & implement product and outreach strategies.

Adaptive Devices for Epilepsy Prevention | *Dell Medical School, Paydarfar Lab* — *12/2020 – 1/2021*
- Built OpenAI-Gym Reinforcement Learning environment for interactive simulation of epileptic phenomena.
- Benchmarked and tuned stable-baselines algorithms for intelligent and minimally invasive intervention.

Federated Learning Under Resource Constraints | *Senior Capstone Project* — *01/2020 – 12/2020*
- Implemented a distributed cloud platform for PyTorch model training & analytics with team of 5.
- Investigated algorithms to reduce client bandwidth usage with minimal compromise in model accuracy.

Beatris: An Evil Tetris AI | *Data Science Lab Final Project* — *11/2019 – 12/2019*
- Augmented existing Tetris AI implementation to improve average score by over 840%.
- Designed Deep-Q Network that dispenses least optimal piece to players, reducing player score by over 85%.

Service & Organizations

Alumni & Spring 2021 Initiative Lead – Roden Leadership Initiative — *03/2018 – 05/2021*
Alumni – Psi Chapter, Eta Kappa Nu Electrical Engineering Honors Society — *09/2018 – 12/2020*
Student Mentor – Student Engineers Educating Kids (SEEK) — *01/2020 – 05/2020*
Teaching Assistant – UT Austin Computing, Embedded Systems, Algorithms courses — *01/2018 – 12/2019*
Volunteer Software Engineer – Lean On Me Peer Support @ MIT — *06/2017 – 02/2018*

Skills

Programming: Python, JS, Java, C, ARM v4 Assembly. **Interests**: Piano, Fitness, Animation, Maker Community.
Technologies: OpenAI StableBaselines & Gym, pandas, Spark, CUDA, React, NumPy, Matplotlib, Blender, GIMP.