Shravya Nandyala

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Skills

- C, Go, Python, SML, OCaml, React, Java, SQL, R
- PyTorch, TensorFlow, Keras, NumPy, NLTK, ROS
- Professional use of Docker, Git, Linux, AWS, GCP
- Fast learner who is up for complex, abstract challenges

Education

Carnegie Mellon University - B.S. in Artificial Intelligence Aug 2020 - May 2024
Relevant coursework: ML, NLP, Computer Systems, Algorithms, Data Structures, Theoretical CS
Princeton University - Dual Enrollment in Computer Science Sep 2019 - May 2020

Experience

Cruise — Machine Learning Infrastructure Labeling Intern May 2023 - Aug 2023
- Optimized integral task tree visualizer, reducing load time from 15+ minutes to < 5 seconds for large trees.
- Created Task Workshop, a flexible and extensible web-based tool which will eliminate 90% of all manual production database edits made by the Labeling team.

Trimble Inc. — Software Engineer Intern Jul 2019 - Sep 2020 & Sep 2022 - Dec 2022
- Implemented algorithms to ensure all 41,000+ zip codes in the U.S. are connected at various layers of grid data.
- Proposed and executed migration of route testing to the cloud to allow for increased speed and frequency. Implemented use of AWS Spot Instances to automate route testing of 1 trillion routes at 50% cost reduction.
- Developed a website interface for routing team's manual testing in addition to automated tests through Jenkins.

Cisco Systems, Inc. — Technical Undergraduate Intern May 2022 - Aug 2022
- Fully automated Cisco's lab inventory management and reservation system, optimizing capital expenditure and boosting developer productivity.
- Developed and managed the Zebra resource management tool, heading team of five software engineers.

Building on Local Trust (ZUZ) — Undergraduate Researcher May 2021 - Dec 2021
- A community-based currency implemented with blockchain technology and the use of a public ledger, making capital available immediately to businesses and aimed at eliminating systemic bias and inequity.
- Designed production cloud environment infrastructure using AWS, Jenkins for CI/CD, and MongoDB Atlas.

Introduction to Computer Systems — Teaching Assistant Aug 2021 - Dec 2021
- Led recitations, bootcamps, and office hours for fundamental computer systems concepts in C programming, memory allocation, virtual memory, cache, signals, proxies, networking, etc.
- Developed written assignments and programming labs, improved course infrastructure.

Projects

Pushkin.ai
- Fine-tuned GPT transformer-based deep learning neural network to generate Russian poetry from a seed text.
- Stress module to enforce rhyme scheme, trained on Pushkin writing data to stylize output and mimic form.

Autonomous Greenhouse
- Built an entirely autonomous greenhouse with Python and ROS for lettuce and radishes.
- Achieved best performance of 10 groups through dynamic behavior scheduling, computer vision evaluation methods.

Question Generation and Answering System
- Fine-tuned T5 on SQuAD for Question Generation for question generation and BERT-SQG model for question answering, using NLTK and Yet Another Keyword Extractor Python packages.

Zebra - Open-Source Resource Inventory, Management, and Reservation Tool
- Project founder, lead system designer, and lead code contributor to open-source project written in Golang.
- Zebra lets authenticated users reserve any set of resources, with predefined and custom templates, metric tracking, and a template marketplace for one-click sharing of dev environments.

Stanford Sophmates Matching Algorithm
- Sole Python developer of program that pairs students with their most compatible friend based on survey input.
- Used K-Means clustering to build a matching algorithm that mapped 600 participants in under 2 minutes.
- Automated sending emails to inform participants of their matches through a Python script.

C0 Compiler (ongoing) - C0 is a subset of the C programming language
- Building a compiler in OCaml to result in X86-64 assembly code file generation from C code input.
- Chordal graph construction using maximum cardinality search for SSA-based register allocation, phi functions to support branching and looping.

Awards and Achievements

AWS Certified Developer - Associate
Founder and President of Cloud Computing Club, an AWS education initiative for high school students
Carnegie Mellon University School of Computer Science Dean's List, High Honors
Phi Beta Kappa Academic Honor Society Early Initiate (1 of 18 students selected from 1600+ person class)