Sneha Mahapatra

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EDUCATION

University of Massachusetts, Amherst, MA Sept 2021 - May 2023
Masters of Science in Computer Science

Purdue University, West Lafayette, IN Aug 2017 - May 2020
Bachelors of Science in Computer Engineering

EXPERIENCE

Ford Motors Co. - GDIA May 2022 - Aug 2022
Software Engineering, Internship Detroit, MI
- Developed endpoints in Spring Boot for tabled data manipulation
- Wrote SQL queries for data manipulation
- Developed Python Script to call Endpoints
- Designed Mobile Application for Ford vehicles in 2 Day Hackthon Challenge
- Skills Acquired: Spring Boot, Java Development, Hadoop, Pyspark, Python Scripting and Development, 42Crunch

University of Massachusetts, Amherst - BioNLP Sept 2021 - present
Application Developer Research Assistant, Research Amherst, MA
- Developed iOS mobile application to help users in poverty find resources and programs to help them in times of need
- Integrated Mapbox software library, and Firebase to help uses find tailored resources close to them.
- Designed web crawling programs to find resources and create a database of resources
- Fine tuning BERT NLP model to extract important information from resources to create a tailored experience
- Skills Acquired: iOS mobile development, Firebase, Mapbox, Natural Language Processing

Purdue University - VAA May 2022 - Aug 2022
Application Developer Research Assistant, Research West Lafayette, IN
- Designed and developed a GUI for a research team that tracks turkey for poultry production
- Designed web application with interactive characterists with and intuitive ui/ux design. It contains 7 interactable components including video data manipulation, 5 statistical graphs, and an animation that tracers the turkey's path, and a tab that showcases ML model used to track turkeys
- Abstract for my GUI accepted to Purdue's Undergraduate Research Conference.
- Skills Acquired: Python Development, Web Development, Plotly, UI/UX design, Model Integration

PROJECTS

596E: Machine Learning for Child Rescue Apr 2022 - Jul 2022
Jagath Jai Kumar and Benjamin Glickenhaus, UMASS Rescue Lab github.com/UMass-Rescue/mobile_app + /desktop_app
- Designed two React-Native Applications that aid law enforcement of different departments to canvas trackers and evidentiary material
- Developed mobile application and desktop application that connects to Fast API backend and MongoDB.
- Skills Acquired: Expo, React-Native, MongoDB, Fast API, Typescript, Javascript

Senior Design: EPCS 412 Jul 2020 - Nov 2020
Prof. Nusaybah Abu-Mulaweh, Purdue University github.com/sne21star/mediapipe
- Designed and developed a Real Time ASL translator application that uses Computer Vision to translate American Sign Language (ASL) for Senior Design.
- Designed and developed iOS application that integrated Mediapipe and ASL translator ML model. Application integrates a static sign ASL translator tailored to the Indiana Sign Language.
- Fined tuned existing ML Model and integrated it with Google's Mediapipe software framework to interpret the ASL Alphabet.
- This application has nine different categories and also has a dynamic sign translator that can translate phrases in ASL alphabet
- Design Team lead for two semesters
- Skills Acquired: Computer Vision Model Development, iOS Development, Integrating CV ML Model, Management Skills

Continuous Analysis of Many CAMeras Mar 2020 - Aug 2020
Dr. Lu, CAM2 arxiv.org/abs/2005.09091
- Research team that revolves around using worldwide cameras and interpret data from the Cameras
- Designed and developed web scraper that could parse different live cameras for information about the public and be used to decipher mask wearing during COVID-19 pandemic.

Teaching

Ideas to Innovation I and II (ENGR 131 and ENGR 132)   Jan 2018-May2018
Purdue University
- Taught MATLAB excel macros

Advanced C Programming (ECE 264)   Aug 2018 - May 2019
Purdue University
- Taught concepts in C and guided students with tools such as valgrind and gdb for debugging purpose

Python for Data Science (ECE 20875)   Jan 2020 - Dec 2020
Purdue University
- Taught data Science concepts, introduction to machine learning, and extensive understanding of how to use python and its libraries

Technical Skills

Programming languages: Python, Java, C, C++   **Web Technologies:** HTML, JavaScript, Typescript
ML/AI: Pytorch, Numpy, Pandas, Matplotlib   **Miscellaneous:** SQL, Git, Windows, Firebase, Mongo

Relevant Coursework

Machine Learning: Neural Networks, Machine Learning, Artifical Intelligence, Python for Data Science
Software: Advanced Algorithms, Software Theory, Object Oriented Programming

Publications

Shengtai Ju, Sneha Mahapatra. *Turkey Behavior Identification System with a GUI using Deep Learning and Video Analytics. IS&T Electronic Imaging,* 2020.

Isha Ghodgaonkar, Abhinav Goel, Fischer Bordwell, Caleb Tung, Sara Aghajanzadeh, Noah Curran, Ryan Chen, Kaiwen Yu, Sneha Mahapatra, Vishnu Banna, Gore Kao, Kate Lee, Xiao Hu, Nick Eliopolous, Akhil Chinnakotla, Damini Rijhwani, Ashley Kim, Aditya Chakraborty, Mark Daniel Ward, Yung-Hsiang Lu, George K. Thiruvathukal. *Observing Responses to the COVID-19 Pandemic using Worldwide Network Cameras. 2020.*

Abstracts

Sneha Mahapatra, Huan-Yuan Chen, Professor Hong Yu. NLP and Annie App for Social Determinants of Health. AMIA 2022 Clinical Informatics Conference May 24-26; Houston TX.

Achievements

Scholarship	RCA Zworykin	2020
Scholarship	McDonnell Douglas Minority and Women	2020
Honor Society	Alpha Lambda Delta Phi Eta Sigma	2018