Sneha Mahapatra

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OBJECTIVE STATEMENT

I am a recent graduate of Purdue University who is a hardworking, creative, and analytical thinker intending to earn a B.S. degree in Computer Engineering, with a Minor in Global Engineering Studies, Minor in Mathematics and a certificate in Innovation and Entrepreneurship. In the fall I hope to attend a masters program for Computer Science. My objective is to obtain an internship and gain valuable skills and experiences.

EDUCATION

Purdue University, West Lafayette, IN *August 2017 – December 2020*
Major: Computer Engineering, GPA: 3.45/4.0
Minor: Global Engineering, Mathematics
Certificates: Innovation and Entrepreneurship

SKILLS

- Python, C, Java, C++, Dash, Plotly, MATLAB, Katalon Studio, Appium, Microsoft, XCode, Android Studio, Honors Spanish for 7 years
- Relevant Courses: Data Structures and Algorithms, Artificial Intelligence, Machine Learning I, Objected Oriented Programming, Advanced C Programming, Python for Data Science

WORK AND RESEARCH EXPERIENCE

Synopsis, Lima Perú, Automation Engineer *Summer 2018*

- Conducted research to identify appropriate software to use and applied my research using Katalon Studio and Appium
- Developed Automated Test scripts to Test Web and mobile Application for Synopsis's client

Purdue University, Teacher Assistant *2018-present*

- Ideas to Innovation I and II (ENGR 131 and ENGR 132)
  - Work with Student in class to teach them how to Code in MATLAB, and write excel macros
- Advanced C Programming (ECE 264)
  - Helped explain topics in C and guided students with tools such as valgrind and gdb for debugging purposes
- Python for Data Science (ECE 20875)
  - Helped students understand data Science concepts, introduction to machine learning, and extensive understanding of how to use python and its libraries

Purdue University, VIP Researcher *Summer 2020, Spring 2020*

- Research team is VAA: Visual Analysis for Understanding Animal Behavior
- Designed and developed a GUI for a research team that tracks turkey for poultry production
- Abstract for my GUI was accepted to Purdue's Undergraduate Research Conference.
- Converted GUI to web application over the summer that is now interactive and intuitive that showcases 7 graphs which can interact with video data, 5 statistical graphs, an animation that tracers the turkey's path, and a tab that showcase ML model used to track turkeys

ENGINEERING PROJECTS

Senior Design: EPCS 412: *Spring, Fall 2020*

- Designed and developed a Real Time ASL translator application that uses Computer Vision to translate American Sign Language (ASL) for Senior Design. This project included the following:

- Designed and developed an application that integrated Mediapipe and ASL translator model that can be used by students at the Indiana School of Deaf. Application integrates a static sign ASL translator tailored to the Indiana Sign Language.
- Fined tuned an 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.

Continuous Analysis of Many CAMeras (CAM^{2}): *Spring, Summer 2020*

- Research team that revolves around using worldwide cameras and interpret data from the Cameras
- Currently working on how to use the cameras to aid in the COVID-19 crisis by tracking those who wear masks or not.
- Designed and developed web scraper that could parse different live cameras for information about the public and be used to decipher mask wearing.

ECE 57000 (Graduate Level AI Course): *Fall 2020*

- Increased Accuracy of Text Recognition Model by modifying Text Rectification process.
- Rewrote Thin Plate Spline Algorithm to straighten curved text found in natural settings before running Text Recognition Model
- Increased accuracy of Text Recognition Model from 0.00% to 42.08%

Pulse Oximeter Project (ECE 362): *Spring 2018*

- Designed a Pulse Oximeter using the MAX 30100 sensor and an STM 32 microcontroller
- Responsible for creating Program that detected IR signals and converted them to the actually values for heartbeat and SP02 levels.

PUBLICATIONS

Shengtai Ju, Sneha Mahapatra. *Turkey Behavior Identification System with a GUI using DeepLearning and Video Analytics.* To appear, *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.

LEADERSHIP

VFS Purdue, Avionics Leader *2018 – present*
Women in Engineering Program, Mentor *2018 – present*
Senior Project Design Lead *Spring 2020-present*
Design Lead for GDAT *Fall 2020*

PROFESSIONAL ORGANIZATIONS

Vertical Flight Systems Purdue

- Research on Kalman Filter, Motor Interfacing, Dynamic Programming, Pixhawk 4 *2017 – present*

WECE *2018 – present*

- Webmaster

Women in Engineering Program *2017 – present*

- Mentor & Mentees Program

National Society of Collegiate Scholars *2018 – present*
Member of the Alpha Lambda Delta Phi Eta Sigma *2018 – present*

HONORS AND AWARDS

Member of the Alpha Lambda Delta Phi Eta Sigma	*2018 – present*
RCA Zworykin Scholarship	*Spring 2020*
McDonnell Douglas Minority and Women Scholarship	*Spring 2020*
Dean's List	*2017, 2018, 2019*
High Honors and Honors List	*2017, 2018, 2020*
Received my diploma in	
Hindustani Classical Music	*May 2014*
Odissi Classical Dance	*August 2017*

CO-CURRICULAR ACTIVITIES

Computer Society, Instructor November 2017

Teach Graduates and Undergraduates the basics of coding in Python.

STAT Learning Community, Data Mining 2018-2019

Learning how to represent, extract, visualize, and interpret data