Soham Saha

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EDUCATION

University of Illinois at Urbana-Champaign
Bachelor of Science in Computer Science, Minor in Statistics May 2021
Dean's List (All Semesters) GPA: 4.00/4.00

Related Coursework:

Applied Machine Learning	Systems Programming	Numerical Methods
Artificial Intelligence	Algorithms & Models of Computation	Methods of Applied Statistics

WORK EXPERIENCE

Jensen Lab *Urbana, IL*
Undergraduate AI Researcher *September 2018 – Present*

- Building a colony picking tool that uses a computer vision algorithm to detect viable colonies and then creates a protocol for a robotic arm to carry out the experimentation
- Deploying this tool as a Django web application for microbiologists to increase efficiency and accuracy of bacteria transformation experiments

State Farm *Champaign, IL*
Enterprise Technology Intern *May 2019 – August 2019*

- Developed an event registration web application using the ASP.NET MVC framework for the Philanthropy department to track employee involvement
- Designed an event registration database on SQL Server for generating quarterly analytics with Python and data visualizations with D3.js to highlight trends in attendance and hours serviced

Codifyd *Chicago, IL*
Product Development Intern *May 2018 – August 2018*

- Created prototypes of REST web services with RESTful and Jersey architectures for cloud-based software
- Collaborated with data analysts to remodel taxonomies and schemas from unorganized product catalog data

INDEPENDENT PROJECTS

Distracted Driving *June 2019*

- Built a convolutional neural network in PyTorch to recognize distracted driving actions such as texting, talking to a passenger, doing makeup, etc.
- Implemented the network into an iOS application that allows a phone's camera to be a dashboard camera

Bridge Deterioration Model *September 2018*

- Collaborated with a team of 4 at PygHack, a university hackathon, to model the deterioration of bridge elements in varying environments to optimize budget allocations for the Illinois Department of Transportation
- Discrete density functions were transformed into stochastic matrices to create deterioration curves in Python

Disease Detector *February 2018 – March 2018*

- Created an Android application that displays the current state of airborne diseases in the user's local area
- Sickness data was mined from Twitter posts and analyzed in a bag-of-words model to produce markers and a heatmap of flu symptoms onto a Google Maps API

LEADERSHIP

Built by Girls | *Co-Corporate Chair* *August 2019 – Present*

- Organizing networking events and tech workshops by coordinating with companies to co-host events that develop technical and professional skills for members to help improve gender diversity in the tech industry

CS 125 Intro to Computer Science | *Course Assistant* *January 2018 – December 2018*

- Lead a section of 36 students through weekly programming labs and held office hours to reinforce concepts including object-oriented programming, data structures, algorithm design, and recursion

TECHNICAL SKILLS

Languages: Python, Java, C, C++, C#, R, HTML/CSS, and JavaScript
Tools & Frameworks: Data Science (PyTorch, TensorFlow, Scikit-learn, OpenCV) • Database (SQL Server) • Web (ASP.NET, Django, jQuery, D3.js)