

# Sourish Kundu

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GPA: 3.92/4.00

## Education

University of Wisconsin, Madison

BS in Computer Science, Data Science, and Economics

- Honors Student in the College of Letters and Science
- Relevant coursework: Matrix Methods in ML, ML for Econ Analysis, Algorithms, Data Structures, OOP, Operating Systems

#### **Experiences**

**Capital One** – *Scale Machine Learning Intern* 

McLean, VA // Jun 2021 to Present

Expected Graduation: May 2023

- Analyzed Capital One customer data to cluster customers using cutting-edge Machine Learning algorithms (DBScan, TSNE, KMeans) with scikit-learn, allowing for in-depth insight of customer patterns
- Employed in-house Python statistical package to solve "two sample one target" comparison problems to explain differences in behavior between separate clusters
- Optimized model performance by tuning hyperparameters to be able to use tool on broader datasets

**Dine In LLC** – Co-founder and Developer, dineinllc.com

Madison, WI // Jan 2020 to Jan 2021

- Founded startup to help small and medium sized restaurants remain competitive during COVID-19 pandemic
- Pioneered web application using Django and Heroku to allow customers to access contactless menus on phones for a safer dining experience, allowing restaurants to update menus in real-time and reduce wait times by ~14.66 minutes/table

**Leidos** – Software Developer Intern

Eagan, MN // Jun 2020 to Aug 2020

- Enhanced the message up-level system with the Time-Based Flow Management (TBFM) team to ensure airborne flights receive needed information more readily
- Utilized C++ with Linux environment to optimize algorithms for up leveling and ran E2E test cases to ensure accurate results
- Presented to mentors on progress, while receiving feedback through code inspections to improve coding practices

**UW-Madison Computer Science Department** – *Peer Mentor* 

Madison, WI // Jan 2021 to Present

 Conducted weekly office hours and lead labs to aid students struggling with the introductory Python class, ensuring comprehension of labs and projects

## Skills and Interests

Languages: Python, Java, JS, C, C++, R | Linux, AWS, Tensorflow, PyTorch, Scikit-Learn, Git, ReactJS, AJAX, REST APIs, Agile Practice

## **Projects**

**Super Mario Bros Reinforcement Learning** – sourish.dev/super-mario-bros-rl

- Implemented Double Deep Q Reinforcement Learning algorithm with PyTorch to train AI to beat Super Mario Bros NES **ML Algorithm Visualization Suite** *mlalgovis.sourish.dev*
- Visualized popular ML algorithms with interactive application on AWS to provide insight as to how a computer "learns" **Dining Capacity** – *diningcapacity.housing.wisc.edu* 
  - Launched application for UW-Madison to track real-time capacity of dining halls during the COVID-19 pandemic

### Volunteering

Coding for Good – Project Lead

Madison, WI // Feb 2020 to Present

- Facilitated team of five peers to create PyTutor application to augment the learning of introductory Python students
- Developed app to allow users, after seeing a short Python script, to guess which line will run next and what output will be
- Gauged students' fundamental understanding of the Python language as more effective preparation for class exams

#### Extracurriculars

**Federal Reserve Challenge** – Head of Training

Madison, WI // Sep 2019 to Present

- Prepared and lead training seminars on Python and its libraries such as Numpy, Pandas, and Matplotlib to educate club members on efficient utilization of Python for economic data analysis
- Organized training events for club members to hone key skills for the workplace (e.g. Excel and Bloomberg)
- Coordinated with executive board to help plan upcoming events to ensure an educational experience for club members

#### **Software Development Club** – Executive Board Member

Madison, WI // Sep 2019 to Present

- Planned and chaired meetings to expose team members various aspects of Computer Science, such as new technologies
  and languages, professional development, and having speakers with expertise in the field come in
- Presented seminars on various topics ranging from TensorFlow to Git to equip club members with essential skills for industry