

SAUMYA AGRAWAL

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EDUCATION

University of Illinois at Urbana-Champaign
Bachelor of Science, Computer Science and Statistics
Minor: Economics

Graduation: May 2022
GPA: 3.66/4.0
Dean's List: Fall 2018, Spring 2020

EXPERIENCE

Research Intern

Summer 2020 – Present

National Center for Supercomputing Applications (NCSA)

SPIN Internship Program, UIUC

- Creating pre-processing pipelines for metabolic and general health data in python
- Using machine learning for the discovery of biomarkers for micro-cardiovascular disease

ACADEMIC ASSISTANTSHIPS

Research Assistant

Spring 2020 – Present

The Personal Relationships, Interpersonal Stress, and Mindfulness Laboratory (PRISM)

Neuroscience Program, UIUC

- Curating functional magnetic resonance imaging (fMRI) for postpartum women data to meet to meet BIDS compliance and data sharing for biomedical images
- Creating a pre-processing pipeline for an fMRI study of affective processing in peripartum women.
- Developing a study to examine how regional neural activation to infant visual and audio cues early after birth predicts the development of future postpartum depression and anxiety.
- Using a factor analytic model of depression and anxiety symptoms to dissociate the roles of both the common and unique elements of related psychopathologies

Course Assistant, Data Science Exploration (STAT207)

Fall 2019 – Present

Statistics Department, UIUC

- Assisting students in understanding Python and its data tools by holding laboratory hours twice a week
- Evaluating laboratory submissions, exams, and projects on a weekly basis

Research Assistant, Clancy Laboratory

Spring 2019

Researchers' Initiative, UIUC

- Performed a correlation study on a demographic dataset collected on the different aspects of identity for Polish and Polish-American Women as well as organization of this data

PROJECTS

Twitter News Sentiment Analysis

June 2020

- Streamed tweets by 30 most followed news providers on twitter regarding the Black Lives Matter movement
- Used NLP tools to calculate and represent the sentiment polarity grouped by news provider and the likes and retweets were visualized as timeseries data

Stock Price Visualization and Prediction

May 2020

- Collected and visualized stock price data for a given Ticker and start and end dates
- Predicted stock price trends using decision tree algorithm and visualized the trend

Soybean Export – Regression Model

May 2019

- Conducted Multifactor Regression by quantifying the significant variables which affected the export of Soybean from the United States in the decade prior
- Improved model fit by mitigating deviations from model assumptions such as multicollinearity, heteroskedasticity, or autocorrelated errors.

SKILLS

Languages: C++, Java, Python, R, HTML/CSS

Libraries/Platforms: Scikit-learn, Android Studio, OpenFrameworks, MATLAB, REDCAP

Experience: Git, basic machine learning, web-scraping, pre-processing, bash scripting

VOLUNTEER WORK

Girls Who Code, Instructor

Taught middle school girls basic web development to get more girls interested in STEM

Phi Eta Sigma, Service Committee Member

Create volunteering opportunities for the members of the honor society to increase community involvement