# Aditya Ramesh

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## Education

**University of Illinois at Urbana-Champaign** **Expected May 2027**
*Bachelor of Science in Statistics and Computer Science* *Urbana-Champaign, IL*

**Adlai E. Stevenson High School** **June 2019 - May 2023**
*Illinois State Scholar, National Merit Finalist, AP Scholar with Distinction* *Lincolnshire, IL*

## Relevant Coursework

- Intro to CS I and II
- Discrete Structures
- Linear Algebra
- Calculus III
- Statistical Analysis
- Statistics + Probability I

## Experience

**University of Illinois at Urbana-Champaign** **January 2024 – Present**
*CS 124 Course Assistant* *Urbana-Champaign, IL*

- Maintain on call for Tutoring for CS124, UIUC's Introduction to Computer Science Course
- Engaged in discourse and tutoring with 100+ Students in Kotlin over the span of the semester.
- Served as a point of contact for course feedback and development for Senior Staff, improving pedagolocial standards.

**University of Illinois at Urbana-Champaign** **August 2023 – Present**
*Technology Services OnSite Consultant* *Urbana-Champaign, IL*

- Provided technical troubleshooting and diagnosis for faculty, students, and retirees with sub 48-hr response rate.
- Served as a primary-lead for UIUC's Student Technology Loan Program.
- Responded to networking setup/configuration, asset management requests, disk/file restoration, virus removal, operation/software installation, and device administration.

## Projects

**Crop Classification Service** **February 2024**

- Developed a KNN Classification Model in Python using Pandas and Scikit-Learn to identify and evaluate 22 Crops' compatibility with an different environments.
- Feature cleaned, scaled, and engineered dataset to train model on Temperature, pH, and Humidity
- Incorporated with React Web App for user-defined environment parameter submission to API endpoint using Flask.

**Stock Prediction Platform** **November 2023**

- Developed a Tensorflow Keras LSTM Model using Python for time-series prediction fo a stock's performance, accounting for Look-Ahead Bias at near 61% Accuracy.
- Called the Alpaca Trading API to retrieve and parse stock closing values on an hourly basis, cleaning and scaling 8 years of training data using Pandas and Numpy.
- Integrated using Django and SQLite to output a graph of a stock's performance and its predicted close values on a Web Application.

**Research Analysis between Gross National Income and Internet Access** **May 2023**

- Employed Hypothesis Test for Regression Slopes, selecting data from 1986-2020 and isolating across 9 Countries.
- Identified a statistically significant positive-relationship between average household income and access to internet.
- Conducted an analysis of real world impact, lurking variables, and future considerations/implications: most notably in regards to the effects of leverage from excess data points.

**Multi-Function Plant Health Monitor** **April 2022**

- Utilized an Arduino Uno Rev3 and an array of Sensors to collect feature data regarding the surroundings a plant.
- Worked with CAD and CNC for probe-housing through the Autodesk Inventor, Adobe Illustrator, and GCode.
- Used Flutter as an interface for user monitoring, updated with a Realtime database on Google Firebase for push-notifications and updated status-indicator
- Written in C++ on Arduino's native IDE for local processing to reduce latency and compute-time for Firebase.

## Technical Skills

**Languages**: C, C++, Kotlin, Python, Java, R
**Technologies/Frameworks**: Pandas, Scikit-Learn, Numpy, Tensorflow Keras, Selenium, BeautifulSoup