

# KARTIK AGGARWAL

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## EDUCATION

**Bachelors of Science in Electrical Engineering and Computer Science (EECS) | University of California, Berkeley | GPA: 3.8 Dec 2024**  
Coursework: CS 61A(The Structure and Interpretation of Computer Programs-Python), CS61B(Data Structures-Java), EECS 16A(Designing Information Devices and Systems I), EECS 16B(Designing Information Devices and Systems II), INDENG 198(Blockchain for Developers), CS 198(Introduction to Full Stack Development)

## TECHNICAL SKILLS

**Languages:** Java, Python, Javascript, Frontend

**Web Development:** Flask framework, React.js, Node.js, MySQL, MongoDB

**Tools:** Photoshop, Canva, Wix, Microsoft Excel, GitHub, Amazon EC2, Postman

**Data Science:** Data Analytics, Machine Learning, Python Libraries (numPy, Pandas, Matplotlib, Seaborn, Scikit-learn), Data Visualization, Statistics, Predictive Modeling

## PROJECTS

**Inventory Management System** | MySQL, React.js, Node.js, Postman August 2021- November 2021

- Designed and developed an employee dashboard for internal management of a Factory using the **APIs, Node.js, and MySQL database**.
- Built various APIs for performing CRUD operations based on GET, POST actions on purchase orders, sales orders as well as for publishing product stocks and inventory levels and deployed on **GitHub**.
- Created a role-based login system for managing and retrieving data as well as added functionalities across various authorization levels for employees from admin to end-user.
- Designed various user Interface components using React and performed **unit testing**.

**Visualizing Rat in a Maze** | JavaScript, ReactJs, Data Structures, Algorithms, Recursion, Backtracking November 2021

- Implemented an algorithm for the Rat in a Maze problem using **Backtracking**.
- Created **functional components** Maze.js, Cell.js using React.
- Built a **web app** to visualize all the possible paths a rat can take in a square maze.

**Celebrity Image Classification** | OpenCV, SVM, Regression, Random forest, HTML, CSS, Javascript, Flask October 2021

- Implemented **OpenCV** library for face and eyes detection and did feature engineering using wavelet transforms.
- Built a model using **SVM, Regression, and Random forest** and fine-tuned it using gridsearchcv.
- Created a front end using **HTML, CSS, and Javascript** and used flask for **HTTP requests**.

**Cardiovascular Disease Classifier** | Seaborn, Scikit-learn September 2021

- Developed a cardiovascular disease classifier using **PCA** and support vector machines (SVMs) that achieved an **accuracy of >95%**.
- Analyzed multiple heart disease datasets using **Exploratory Data Analysis** and visualized trends using **Seaborn**.

**Home device Controller** | Arduino, C++ July 2020

- Designed a **Door Automation System** to avoid physical contact in COVID-19 using **Arduino, Ultrasonic sensors**, and **C++**.
- Designed a **Smart Automation System** for Controlling Home Appliances via Mobile using Arduino, **HC-05 Bluetooth Module**, **Relay**, **C++**.

## LEADERSHIP

**Co-founder, Head of Development and Marketing, 'Global Investors at Berkeley'** October 2021

- Founded UC Berkeley's first long-only investment organization focussing on emerging and developed global equities.
- Raised capital of \$10,000 within 4 months of GIB's operation with consistent content creation and social media handling.
- Managed the logistics of the club's fund and carried out research to find target companies.

**IT Head, Children for Children MUN** <https://bit.ly/3cvtP5Q> August 2020

- Organized a three-day online event conducting discussions about Education policies across India and the impact of COVID -19.
- Partnered with CRY(Child Rights & You) to raise more than Rs. 1.6 lacs for middle school education in rural areas.

**Founder, 'Let's Educate All'** June 2020

- Conducted more than 10 donation drives to collect 56 devices like Tablets, Smart Phones, Laptops helping over 50 students with their online classes during the pandemic.

**Lead Editor, School Editorial Team** 2019-2020

- Conducted interviews, wrote articles, performed ground reporting, edited the work of 15 writers, guided graphic designers, photographers, and artists, and assisted in the making of Amity's monthly newsletter 'Amity Pravah', circulated throughout the school.

**Founder, IT Club, Amity International School, Noida** 2019-2020

- Organized Tech competitions and Cyber Security workshops and held panel discussions in school which increased student participation in computer-related activities by 50%.

## ACHIEVEMENTS

- All India 2nd Position, Python Coding & Programming Competition hosted by Amity School of Engineering and Technology. July 2020
- Won the IT Trivia at Bhavan's Dewang Mehta Memorial IT Symposium (Sponsored by NASSCOM) Feb 2020
- AP Scholar Award, Advanced Placement: Calculus AB - 5, Physics C Mechanics - 5, Physics C Electricity and Magnetism- 5 2019
- Certificate of Excellence for 100% marks in Mathematics in Grade 10 2018