

# VIDIT AGRAWAL



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## PROFESSIONAL EXPERIENCES

### *Software Developer* | **Microsoft Pvt. Ltd., Noida** (July 2021 – August 2023)

- Working in M365 Buildout Coordinator, Special Clouds team. Contributed to areas: Core Planner, CIS, Griffin D/D2, AAD App.
- Wrote design workflows, unit tests in C# and .Net, and utilized Azure resources.
- Led a core area, collaborated with partner teams, participated in design and PR reviews, and conducted knowledge sharing sessions. Closely worked with Senior Engineers, Program Manager and Architects.
- Introduced methodologies and best practices enhancing product definition, release processes and service customization as per user needs.

### *Data Analyst Intern* | **American Express, Gurugram** (May 2020 – July 2020)

- Delivered the project, "Time Series Forecasting Model using Geo-Aggregated Data", targeted to predict the effect of COVID-19 on credit card demand and prospect acquisition.
- Demonstrated detailed exploration, EDA, and Time-Series Models in python as well as Panel Data regression in R using open-source data affecting US financial market.
- Utilized Google APIs and tools such as GCP, Google Trends and Google Keyword Planner.

### *Winter Internship* | **Jawaharlal Nehru University, New Delhi** (Dec 2018 – Jan 2019)

- Used Java RMI and basic PHP to code a servlet question-answer application.
- Utilized a different server for storing the database using MySQL, transferred questions across to create a quiz, and displayed the final score and time taken on simple UI.

## ACADEMIC QUALIFICATION

*M. Eng. in Software Engineering* | University of Maryland, College Park (2023-2025)

GPA: N/A

*B. Tech. in Electrical Engineering* | **Indian Institute of Technology, Roorkee** (2017-21)

GPA: 8.055

## PROJECTS UNDERTAKEN

### *Crime File Management* (Bachelor Thesis Project) (Sept 2020 – Apr 2021)

- Created a web-application for online registration and status check of complaints using React JS on frontend, Firebase for database and python for crime prediction.
- Implemented separate login for visitors, registered users, administrators, and selected police branches. Completed and presented design flow with both high-level and low-level design.
- Added ML classification and time-series analysis models to predict type of crime most likely to occur at given time, region-wise. Also added a visualization dashboard on frontend.

### *Data-Driven Prediction of Battery Cycle Life Before Capacity Degradation* (Jan 2020 – May 2020)

- Used neural networks-based approach to predict the remaining lifetime of Lithium-Ion batteries using details concerning a few charging-discharging cycles.
- Designed and Implemented a multi-layer CNN using TensorFlow 2.0 with Keras as the backend to create a state-of-art solution.
- GitHub Link: <https://github.com/vidz-1/Prediction-of-lifetime-of-Li-ion-batteries>

### *Movie Recommendation Web Application* (July 2020 - Sep 2020)

- Developed a Full Stack application for movie suggestions using React JS, Flask, and Machine Learning techniques.
- Utilized NLP and Cosine Similarity for recommending top 10 movies as per the filters based on Genre, Actors, Director, Language, Popularity. Deployed on Heroku Cloud Server.
- Implemented Sentiment Analysis to show User Reviews using Emojis as per the sentiment.
- URL: [blackboxasy.herokuapp.com](https://blackboxasy.herokuapp.com). GitHub link: [https://github.com/vidz-1/Movie\\_Recommendation](https://github.com/vidz-1/Movie_Recommendation)

### *Flood Rescue Drone* – Artificial Intelligence and Electronics Society (ArIES)

- Detected flood victims using the YOLO framework, a DL algorithm for real-time object detection and sent their GPS location to the rescue centre using Quadcopter and Raspberry Pi.
- Displayed in Shrishti '19, IIT Roorkee Annual Techno-Hobby Exhibition and was the leading showcases in the exhibition.

## AWARDS & SCHOLARSHIP

- 6th position in Inter IIT Cultural Meet 2019 in the Acrylic Painting competition held in IIT Bombay.
- Secured 8th position in Dare2Compete Online Hackathon '20 among 6700+ participants.
- Secured 6th rank in Coderulon '20 organized by IIT Roorkee among 4000+ participants.
- Winner in Singles and Doubles intra-hostel Table-Tennis Tournament in 2017, 2019 and 2020.
- Winner in Badminton inter-department tournament, EESS in 2018 and intra-hostel tournament, Blaze in 2020.
- Secured IITR Heritage Fund Excellence Award '2021 for best all-rounder and bagged prize money of 10,000 INR.

## TECHNICAL SKILLS

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- Courses  
**Expert:** Data Structure and Algorithms, System Design and Design Principles, ML/DL Algorithms  
**Advanced:** Database Management (SQL), Operating System and Graph Theory  
**Intermediate:** Android Development
- Languages  
**Expert:** C++, Python, C#, JavaScript  
**Advanced:** R, Java,  
**Intermediate:** MATLAB, TypeScript, PHP
- Tools and Frameworks  
**Expert:** React.js, Node.js, Postman, TensorFlow, Pytorch, Scikit-Learn  
**Advanced:** Redux, Flask, Express.js, Raspberry Pi, Arduino, and other micro-controllers  
**Intermediate:** Docker, Nginx, Azure - Active Directory, Data Lake, CosmosDB, DevOps, PowerBI

## POSITIONS OF RESPONSIBILITY

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*Joint Secretary* | **Artificial Intelligence and Electronics Society (Aries), IIT Roorkee** (May 2020 – May 2021)

- Worked on microelectronics such as Arduino, Raspberry pi, encoders, and various sensors in several projects.
- Worked in the field of computer vision and object detection models such as YOLO, InceptionV3 and OpenCV.
- Led to the foundation of Aero Club, Aries, a club dedicated to projects on RC planes and drones.
- Mentored students of the first and second year on different technical projects.

*Additional Secretary* | **Fine Arts Society, IIT Roorkee** (May 2020 – May 2021)

- Organized and participated in Darpan, annual art festival, IIT Roorkee.
- Led IIT Roorkee Fine Arts contingent comprising 14 individuals for Inter IIT Cultural Fest'19 at IIT Bombay.
- Completed several art forms such as sketching, painting, sculpting and wall paintings across campus.

## EXTRACURRICULAR ACTIVITIES

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*Participant* | **Consulting and Analytics Group, IITG** (Apr 2020 – June 2020)

- Explored and implemented EDA, Data Pre-processing, Scrapping and various Machine Learning algorithms in "Summer Data Science Boot Camp" held by CAG, IIT Guwahati.
- Predicted IBM employee attrition in covid for Kaggle Competition-Capstone Project; secured standings in top 30%.

*Participant* | **Codefundo++, Microsoft** (Oct 2018)

- Successfully built an android application, "Forum of Disaster Management", responsible to tackle lack of public awareness in case of catastrophe using Android Studio and Firebase.
- The app was a social platform- allowed people to tag pictures of 'disasters' along with their GPS location on a map to alert the residents and authorities in these locations.

*Mentor* | **Student Mentorship Program, IITR** (July 2019 - May 2020)

- Mentored 12 fresher students from same and cross branch throughout the year regarding college academics, college societies, various forums and different national hackathons.