AISHWARYA CHANDRASEKARAN

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EDUCATION

University of Delaware **August 2021-2026 (Expected)**
Doctor of Philosophy, Computer Science
Research focus: Human-Computer Interaction
Coursework: Introduction to HCI, Introduction to Computer Vision, Introduction to Artificial Intelligence

BMS Institute of Technology-Visvesvaraya Technological University, India **August 2020**
Bachelor of Engineering, Computer Science
Coursework: Object-Oriented Concepts, Operations Research, Machine Learning, Natural Language Processing, Digital Image Processing

PROFESSIONAL EXPERIENCE

University of Delaware

Graduate Research Assistant **September 2021– Present**

Areas of Research: Human-Computer Interaction and Affective Computing

Project: Supporting future crisis line work through the inclusive design of worker-facing tools that empower self-management of wellbeing and performance

- This NSF funded project is in the need-finding phase where we are working with organizations to understand the nature of the work of crisis line workers and what kind of tools might benefit them

Project: Computer-Mediated Monitoring and Just-In-Time Interventions for Improved Performance and Burnout Mitigation with University Computer Science Students

- Create computer-mediated assessment and informatics tools to monitor and study the emotional state of students while performing cognitively heavy tasks.
- Long-term goal is to develop new sensing techniques and just-in-time intervention that allow users to self-monitor, develop skills, and better manage their personal wellbeing toward improving productivity and avoiding burnout.

MiQ, Bangalore, India

Data Scientist I – Research and Development **October 2020 – August 2021**

Intern, Data Scientist I – Research and Development **January 2020 – September 2020**

- Predict the audience tune-in (both Incremental and Churn) for the entertainment industry (Studios, media houses, networks, etc.) clients' content's upcoming airings to help their business.
- Built efficient Data Engineering pipelines to orchestrate the movement, transformation, validation, and loading of data.
- Creating and analyzing documentation for effective use by stakeholders.
- Full-stack development for a Data Science use case: Using Python (Flask) for the backend and JavaScript, HTML, CSS, and Bootstrap for front end, development of a web-based UI.

Analytics Vidhya, Gurgaon, India **July 2019– September 2019**

Data Science Intern – Strategy and Content Department

Analytics Vidhya is the world's second largest Data Science community in the world after Kaggle.

- Developed a user learning platform application based on the concept of "Context based byte sized learning" by taking inspiration from a mobile application called MIMO.
- Analyzed user journey throughout the use of the application for further Research and Development.

NVIDIA and NASSCOM, Bangalore, India **February 2019 – April 2019**

Deep Learning Intern

NVIDIA in association with NASSCOM (The National Association of Software and Service Companies) hosted an External Internship Program for which I was selected among leading professionals and students

- Worked with Convolutional Neural Network models built from scratch that fulfill certain constraints like not having used fully connected layers for Image based use cases.
- Worked with RESNET, DenseNet and YOLO for certain use cases.

Vijña Labs, Bangalore, India **September 2018 – February 2019**

Intern – Research and Development

Vijña Labs is an R&D center of "The Manipal Group" which focuses on AI and IoT platforms and solutions.

- Worked on Image Processing, Image Segmentation and Augmentation for Video Analytics to enable Security, Surveillance and Authentication, Intelligent Transportation Systems projects.

Cvision.ai, Remote **November 2018 – December 2018**

Machine Learning Intern

- Worked on Image processing, Image segmentation, Image Augmentation and Machine Learning techniques for recognizing and handling different types of damages like dents, scratches, etc., in the Insurance industry to identify fraudulent claim transactions.

Indium Software, Chennai, India **January 2018**

Software Testing Intern

- Developed skills including Test Planning and Documentation, Reporting, Rational Analysis, Logical Thinking, Independent working and providing good Customer Support.
- Learnt to master various Testing tools and techniques like black box testing, penetration testing, security testing, system testing and unit testing.

ACADEMIC PROJECTS

- Senior Capstone Project: MindReader - A Brain Computer Interface (BCI) speller to convert brain signals read in the form of EEG (Electroencephalogram) into text for people with motor disabilities such as Epilepsy. Eye Blinks were used as control signal in this project. A 14 channel EEG dataset was used to classify eyeblinks. Used multiple algorithms for the same with the K Star classifier performing the best achieving an accuracy of ~97%. For each sample in the dataset, four features namely PFD (Petrosian Fractal Dimension), HFD(Higuchi Fractal Dimension), SVD(Singular Value Decomposition) Entropy, and Permutation Entropy were also extracted for feeding as additional input to the classifier which improved the accuracy.
- Virtual Reality Therapy: Worked on an improved version of the creative line art drawing game in an immersive VR environment as a tool for enjoyable physical therapy for upper extremities.
- Generating timeline of Transactions using email data: Train a classification model for Bank and Non-bank transactions and use NER labels as a feature vector. Extract transaction amounts from bank transactions and group it with corresponding non-bank transactions. Use NER texts for grouping. Finally generate a timeline of transactions indicating 'total amount' which represents the amount added or subtracted to the history of previous amounts.
- Feedback App: Android Application development for the college using Android Studio to collect the feedback of students in different departments regarding facilities and/or identifying spheres where the college can perform better.
- Database Management System Mini Project: Attendance Management System and UI developed using Java
- Computer Graphics Mini Project: Analog Clock display by extracting System Time

SKILLS

- Languages: Python, PySpark, C++, Java, HTML, CSS, PHP, JavaScript
- Technologies/Frameworks: Apache Hadoop, Apache Spark, Bootstrap, Flask, Android
- Databases: SQL, Amazon S3 (NoSQL Database)
- Tools: Qubole, Databricks, Git/GitHub/Bitbucket, Google Colab, Postman, AWS
- Soft Skills: Communication, Teamwork and Leadership demonstrated in the form of being department and college level heads for various technical and non-technical fests

ROLES AND RESPONSIBILITIES

- Teaching Assistant at Google's Developer Student Clubs
- Teaching Assistant at Free Software Movement of Karnataka's winter camps
- Lead Singer in the college band
- Core Committee Member of The Free Software Club
- Grace Hopper Celebration India Scholarship Reviewer at AnitaB.org
- Free and Open-Source Software (FOSS) enthusiast
- Organizing committee member of various International conferences on Machine Learning and Data Science such as Data Hack Summit, Anthill Inside, The Fifth Elephant, etc.

ACCOMPLISHMENTS

- Selected to attend the Grad Cohort Workshop for Women 2022, which is an NSF funded program organized by the Computing Research Association
- Secured 3rd place in the Women in Data Science Texas chapter's Datathon, 2021.
- Awarded the Grace Hopper Celebration (GHC) Virtual Attendance Grant by the Department of Computer and Information Sciences at University of Delaware
- Awarded Student Scholarship to attend GraphQL Asia 2020
- Awarded Student Scholarship for DevOps Days 2018
- Selected as one of the top three students by IBM for Eclipse Day
- Secured 989 rank in the Common Entrance Test (CET) which is the Engineering entrance in the state among 2 lakh students