ARYAMAN MISHRA

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ACADEMIC QUALIFICATION

- Masters in Computer Science, University at Buffalo SUNY, New York, USA; **August 2024-Present**
- Post Graduate Diploma in Big Data Analytics (PG-DBDA), Centre of Development of Advanced Computing (CDAC), Bangalore; **March 2024-August 2024**
- Bachelor of Technology in Computer Science, Vellore Institute of Technology, Chennai**, July 2019-July 2023**; CGPA: **8.66/10**
- City Montessori School, Lucknow; **April 2019**; Percentage: **94.25%**
- Saint Francis' College, Lucknow; **April 2017**; Percentage: **89.6%**

WORK EXPERIENCE

Graduate Engineer Trainee, Nippon Electric Company (NEC), Jun 2023 – December 2023

- Successfully scraped and recorded data from multiple e-commerce websites.
- Developed a Python-based command line tool (Google Shopping Spider CLI) and implemented proxies to avoid request detections.
- Achieved 92% accuracy in product matching by integrating FuzzyWuzzy matching techniques to compare products along with their specifications across Government domains and results from Google Shopping.

INTERNSHIPS

Co-op Intern, Advanced Micro Devices (AMD), Bangalore, Aug 2022-May 2023

- Developed a CLI tool to automate transformation of CUDA samples for AMD hardware, which were then integrated with AMD's Unified Inference Framework.
- Created patches that enabled seamless processing across 7 hardware specifications, removing constraints and ensuring tool compatibility with diverse system configurations.
- Enhanced data translation and encoding processes for server-host data transfer, optimizing sample functionality and achieving 20% faster data processing within AMD's proprietary ROCm Stack.

MLSE(Machine Learning and Systems Engineering) Intern, Nvidia, Bangalore, May-June 2022

- Developed a motorsport telemetry chatbot using Hugging Face and PyTorch, providing real-time data on throttle, brake, gear, RPM, and speed.
- Achieved 95% accuracy in determining right-of-way for drivers side-by-side at corners, leveraging reinforcement learning to refine decision-making and eliminate the need for computer vision.
- Successfully hosted the chatbot on Heroku, migrating to an open-source API and removing dependency on Kaggle datasets for real-time data retrieval.

RESEARCH PROJECTS

- **Title: Online Exam Proctoring System [GITHUB][WEBSITE]**

Duration: May 2024 - August 2024
Team Size: 03
Brief Description: Developed an online exam proctoring system using NextJS and Tailwind CSS for the frontend, Clerk API for authentication, and Stream API for real-time meetings. Implemented an eye-tracking feature with OpenCV to enhance exam security by monitoring examinee eye movements. Individual Role: Assisted in user authentication, integrated APIs into a singular module and made adjustments to token generations and front-end appearance.

- **Title: Parking and Routing System for E-Vehicles [GITHUB]**

Duration: Jul 2022 – Apr 2023
Brief Description:Created an EV Parking System with a robust Flask-based backend and efficient parking space allocation, using heap data structures. Additionally, an EV Routing System was implemented, leveraging APIs from OpenStreetMap and OpenChargeMap for geospatial data and

charging station information. JavaScript was integrated to enhance user interaction, and a Python-based CLI was designed for user convenience.

- **Title: Anti-Bullying Application [GITHUB]**

Duration: Dec 2021 – Apr 2022
Team Size: 03
Description: Developed an anti-bullying mobile application using JAVA, Android Development, and Firebase. The purpose was to allow users to express themselves through social media blogs and to provide a robust reporting mechanism for bullying incidents.
Individual Role: Crafted an intuitive blog masking interface to safeguard user's identity.

- **Title: Distributed Password Cracker made with Tkinter [GITHUB]**

Duration: Jul 2021 – Jan 2022
Team Size: 04
Description: Developed a distributed password cracker application, using Tkinter for the user interface. It allowed users to decrypt encrypted files, while overcoming system-imposed limitations.
Individual Role: Designed and implemented Tkinter-based user interface, and managed data objects for efficient password string database utilization.

- **Title: Hospital Administration Website with Informational Dashboards [GITHUB]**

Duration: Jul – Dec 2021
Team Size: 03
Description: Developed a hospital administration website with a prescription model and informational dashboards, offering real-time insights into hospital operations like bed allocation and appointment scheduling through chatbots for disabled patients.
Individual Role: Created and implemented data visualizations using Tableau and developed an NLP-integrated model to analyze user reviews on drugs.

TECHNICAL SKILLS

- Programming: C, C++, Python, Java, JavaScript, SQL, HTML and CSS
- Frameworks: MERN Stack, PyTorch, Keras, TensorFlow, Django, Flask, EJS, NodeJS, Next.js, Three.js, React.js, REST API and WordPress
- Tools: Visual Code, Git with LFS, Android Studio, Tableau, Microsoft Azure, IBM Cloud Services, AWS, Heroku CLI, Vercel , Postman, Google Colab, Anaconda, Unity, Unreal Engine 4, R, MATLAB, Firebase, Scapy, Wireshark and Docker

CERTIFICATIONS

- **Vellore Institute of Technology**
  - Knowledge Management, April 2020
  - Artificial Intelligence for Beginners, April 2020
  - Machine Learning Using Python, April 2020
  - Digital Image Processing Using Python, February 2020
  - Top 3 Finalist in the WIE Bug-Off JAVA Category, an IEEE coding competition, September 05,2021
- Introduction to Packet Tracer, offered by Cisco, September 2020
- AWS Academy Graduate, AWS Academy Cloud Foundations, July 2021
- Introduction to Cybersecurity, offered by Cisco, March 2021
- **IBM**
  - Design Thinking, August 2021
  - DevOps Fundamentals, August 2021
  - Agile Training Module, August 2021
- Project Build-A-Thon on Artificial Intelligence, by SmartInternz, August 2021
- Microsoft AI900 Azure AI Fundamentals, by Microsoft, December 2021
- Spoken Tutorial Certification in JAVA, Python, C, C++ and PHP, February 2021

EXTRACURRICULAR ACTIVITIES

At Vellore Institute of Technology, Chennai

- Vice President, Game Development Club, Oct 2021 – Jun 2022
- Content Creator and HR Head, Game Development Club, Aug 2020 – Sep 2021

- Public Relations Specialist, Debate Society, Jun 2020 – Jun 2021
- Operations and Creative Department Member, Voice-It Radio Club, Sep 2020 – Feb 2021