

SAYONIKA DAS

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EDUCATION

University of Wisconsin, Madison – Madison, WI

Aug 2025 – May 2027

- Incoming Graduate Student, Master of Science in Computer Science

PES University – Bengaluru, India

Aug 2019 – Jul 2023

- Bachelor of Technology in Computer Science and Engineering, **CGPA: 8.99/10.00**
- Coursework: Machine Intelligence, Cloud Computing, Computer Networks, OS, Big Data, Database Management System, Object Oriented Programming, Data Structures, Algorithms, Compiler Design, Software and Systems Performance, Information Security, Engineering Mathematics, Linear Algebra.

PROFESSIONAL EXPERIENCE

Software Engineer - I, Hewlett Packard Enterprise - Bengaluru, India

Aug 2023 – Present

- Contributed to the design and development of software components of enterprise mission critical servers that notifies and reports events, status, system failures.
- Led the feature enhancements and defect resolution of the product, ensuring it meets the high standards required by Tier 1 customers, including Google, Amazon, and Azure.
- Significantly enhanced the speed of event processing algorithms and resolved packet loss issues in 32-Socket systems during high volume events.
- Developed a React-based GUI log analysis tool with an LSTM-powered parser engine that analyzes system logs to identify failure trends and predict critical/fatal events.

Research and Development Intern, Hewlett Packard Enterprise - Bengaluru, India

Jan – Jul 2023

- Designed and implemented an algorithm to secure PXE boot by integrating two-factor authentication on DHCP and PXE servers, ensuring secure communication with enterprise servers.
- Developed the backend of a university relations tool using Node.js and Express.js to track the progress of interns and their mentors within the organization.

Cybersecurity Intern, Dell Technologies - Bengaluru, India

Jun – Aug 2022

- Contributed to malware detection and reporting in the endpoint security team, utilizing ePolicy Orchestrator and performing analytics on endpoint data.
- Created a dashboard using advanced queries on endpoint data to view relevant information on health status, malware detection on each system in the network.

PUBLICATIONS

StoryTube: Generating 2D Animation for a Short Story - Published in IEEE Xplore and presented at the 3rd ICCIKE 2023, at Amity University, Dubai. (DOI:10.1109/ICCIKE58312.2023.10131811)

PROJECTS

Catalog Indexing Engine

- Developed a Catalog Indexing Engine that vendors can use to track SKUs, use structured or unstructured querying to fetch product information.
- Used Kafka for real-time data streaming, Elasticsearch for indexing and structured queries, and Large Language Models (LLMs) for unstructured queries.
- Enhanced Elasticsearch indexing by implementing incremental indexing, allowing new data to be indexed relative to the last indexed ID, improving efficiency.

Spam Classification with Spark MLlib

- Conducted data streaming, preprocessing, and model training with Naïve Bayes, SGD Classifier, and MiniBatch KMeans.
- Employed LabelEncoder and Hashing Vectorizer for efficient data handling and analysis.
- Evaluated models with accuracy, precision, recall, and confusion matrix metrics using scikit-learn.
- Technologies used: PySpark, scikit-learn, ML models, socket programming.

Vegan Pizza Press

- Developed a full-stack vegan pizza delivery app with the MERN stack, featuring user registration, secure login with password encryption, and order status tracking.

- Integrated comprehensive user authentication and management functionalities to ensure a seamless and secure user experience.

TEACHING

- Taught engineering faculty through Hewlett Packard Enterprise's Faculty Development Program (FDP) and onboarded incoming interns, delivering structured sessions on Generative AI, NLP, and Transformer-based models with a focus on enterprise applications.

FUNDING AND SCHOLARSHIP

- Prime Minister Scholarship by KSB: Granted annually throughout undergraduate studies.
- IAFBA Subroto Memorial Scholarship: Received annually for the duration of undergraduate studies.
- MRD Scholarship, PES University: Granted for maintaining a high CGPA during undergraduate studies.

SKILLS

- Languages & Systems Programming: Python, C, C++ (low-level), Java, JavaScript, R, Linux system programming
- Database: PostgreSQL, MySQL, MongoDB, Amazon DynamoDB
- Computer Networks: Socket Programming, TCP/IP, Wireshark, Cisco Packet Tracer
- Tools/Frameworks: Git, REST APIs, AWS, Apache Spark, Hadoop, Docker, Jenkins
- Software Engineering: Agile (Scrum), SDLC, cross-functional collaboration, product delivery in fast-paced environments