Chethana Prasad K
SE, Cloud ML Engineer

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EDUCATION

Georgia Institute of Technology, Atlanta, Georgia, USA.   Online. Expected Graduation: 2026
Master of Sciences MS, *Computer Science. Specialization: Machine Learning and HCI*

PES University, RR Campus, Bangalore, Karnataka, India.   Mar 2025
M.Tech(Research) M.Res , Computer Sciences Engineering – Machine Learning Engineering.
Coursework: Fundamentals of Scalable computing, Stochastic models of Machine learning, Advanced Cloud Computing, Robotics, Topics in Machine Learning, Million-way Parallelism, Research Methodology and Research Principles.
Dissertation: Federated Machine Learning and Algorithms.

Visvesvaraya Technological University, Belgaum, Karnataka, India.   2017-2021
Bachelor of Engineering BE, Electronics and Communication Engineering.

TECHNICAL SKILLS

- *Languages:* Python, C, Java, SQL, HDL, MATLAB
- *Skills:* Human-Computer Interactions, Machine Learning Ops, Data science and Analytics, Banking and Decision Sciences.
- *Tools, Libraries and Miscellaneous:*
  - *Cloud & DevOps*: AWS Cloud Services, Docker, Jenkins, Kubernetes, Keras,Grafana,Openstack,Terraform,Packer.
  - *ML/ Data science*: TensorFlow, (PyTorch), Pandas, Numpy, Matplotlib, Scikit-learn, XGBoost, My-SQL, AutoML, MySQL,PostgreSQL,DynamoDB.
  - *HCI Tools:* Figma, Adobe XD, Sketch
  - *Hardware Description Languages:* Verilog, VHDL
  - *Java expertise :* JavaScript, Spring Boot.
- *Languages Known:* English, Kannada, Hindi, German(Beginner)

WORK EXPERIENCE

Indian Institute of Sciences, Bangalore - Project Associate /Research Intern   2025-Present
- Master by Research Thesis: Research Associate working on Federated ML and Frameworks.

CRAIs LABS, PES University, Bangalore - Project Associate /Research Scholar Faculty   2023-Present
- Graduate Teaching Assistant designing coursework's for undergrads as well as Computational Robotics Teaching Assistant.
- Managed and supervised the development of collaborative robot (Cobot) projects in partnership with industry stakeholders.

Infosys Ltd., Bangalore. - Systems Engineer   2021-2023
- Led testing efforts within the Finacle team, delivering 99% on-time software releases, resulting in a 10% increase in client satisfaction and minimizing delays that could lead to costly downtime.
- Developed table maintenance modules that reduced database testing time by 25%, improving efficiency and contributing to 10% faster deployment cycles, directly enhancing profitability for clients.
- Designed and executed comprehensive test plans using SQL for database validation and JavaScript for front-end testing, achieving 100% accuracy in key testing areas and reducing post-deployment errors.
- Collaborated cross-functionally to proactively resolve software issues, contributing to a 30% reduction in bug resolution time, leading to smoother client operations and improved bottom-line performance.
- Spearheaded test case automation, cutting manual testing efforts by 30% and increasing overall test coverage by 40%, which helped drive cost savings by 20% in testing cycles.

PROJECTS and TECHNICAL PUBLICATIONS

- ***Comparative Analysis of Federated Machine Learning Algorithms: Performance, Scalability, and Security Metrics in Decentralized AI Systems***
  - This thesis investigates and benchmarks key Federated Machine Learning (FML) algorithms across various performance, scalability, and security dimensions. It explores algorithmic trade-offs in resource-constrained environments while addressing privacy and communication overhead. The research aims to provide actionable insights for selecting optimal FML approaches in diverse applications.
- ***Optimizing Financial Decision-Making in the Banking Systems Using Cloud Computing and Federated Machine Learning FinGraphX for Stock market Prediction****Under review for Journal
  - Designed a system leveraging cloud computing and federated machine learning to optimize financial decision-making. This project focuses on enhancing performance, reducing latency, and ensuring data privacy across multiple financial institutions.
- ***Optimizing an IoT Framework addressing Data Fusion and Federated Machine Learning Algorithm to enhance terrain detection and response time metrics to Leverage Edge Computing Infrastructure.*** *Under review
  - Technical Publication on designing virtually simulated autonomous vehicles with multi-sensor inputs. Developed a Federated Cloud system using AWS, TensorFlow, and PyTorch, implementing a FedAvg-based algorithm that improved performance
- ***Analyzing Supply Chain Management for Stores and Supply as an Intern at Hindustan Aeronautics Limited(HAL), Foundry and Forge Division, Bangalore.***
  - Under the Guidance of Mr. Rajeev Dutt, AGM,HAL , Analyzed methods and processes which improved supply chain processes for stores and supplies.
  - Analyzed about procurement strategies that optimized vendor selection and procurement cycle models which could reduce time cycle by 20%, ensuring timely and cost-effective acquisition of materials.
- ***Analyzing Recent Trends in Telecom Technology as an Intern at BSNL, Mysore.***
  - Researched 5G and IoT trends, that are aiding as fundamentals for BSNL's strategic planning.
- ***Morse Code based secured authentication system through Artificial Intelligence, IARJSET 2021.***
  - Bachelor Thesis : Designed a model which presents a real-time application for gaze-based PIN entry, and eye detection and tracking for PIN identification using a smart camera. I was able to provide a real time eye tracing for password authentication for people who authenticate themselves using Morse code.
- ***Channeling a FIFO Buffer for video streaming, ICSEM 2020.***
  - Implemented a FIFO buffer using VHDL for efficient video streaming data management, ensuring smooth data flow and minimal latency.

CERTIFICATIONS

- Java and Advanced Java - Infosys Ltd -.Feb 2022
- Finacle Online banking Ver 11.2.X Technical certification -Infosys Ltd - Apr 2022
- Infosys Certified PL-SQL associate -Infosys Ltd - Aug 2022
- AWS Certified Cloud practitioner certification training- 2024
- Google Advanced Data Analytics Specialization - July 2023 Credential ID: WUC2GYMYY6AM
- Google Project Management: Specialization - May 2023 Credential ID: E8VU2XTPAWNQ

MENTORSHIP

- ***Teaching Assistant: Computational Robotics***
  - Assisted in Framing the syllabus for the coursework and coursework research.
- ***Research Assistant: Federated Learning on Swarm Robots***
  - Assisted a senior PhD scholar in designing Robotic systems, Website and collecting Datasets.
- ***Research Scholar: cRAIS,PESU***
  - Mentored Interns on designing systems on ROS, webots, Implementation performance calibration at the Crais,PESU.