

Pavan Kalyan Reddy Cherupally

☎ (623)-275-0672 ✉ pcherup1@asu.edu [in linkedin.com/in/pavankalyan63/](https://www.linkedin.com/in/pavankalyan63/) [github pavank63.github.io/](https://github.com/pavank63)

Education

Masters in Computer Science

Arizona State University

May 2025

Tempe, AZ

B.Tech(Honors) in Electronics and Communication Engineering

International Institute of Information Technology, Hyderabad

May 2021

Hyderabad, India

Technical Skills

Programming Languages: Python, C, C++, Java, PHP, SQL, Ruby, R, Bash, GoLang, NoSQL, ReactJS, HTML, CSS

Tools and Frameworks: Django, Flask, Kubernetes, Selenium, Apache, Keras, Rails, Spring, TensorFlow, OpenCV, AWS, GCP, GitHub, Jenkins, Grafana, Bootstrap, Cassandra, Kafka, Docker, HDFS, RESTful API, Hadoop, SQS, NodeJS, Linux, CI/CD

Soft Skills: Problem Solving, Communication, Teamwork, Collaboration, Adaptability, Creativity, Accountability, Leadership

Experience

Software Development Intern

Sep 2024 – Present

Advanced Micro Devices (AMD)

Austin, TX

- Developed a React-based framework to automate Phoronix Test Suite benchmarking, creating a web app letting users run workload lists on remote Linux systems and visualize results, enhancing interaction and reducing manual effort by 100%
- Customized the open-source Phoronix repository by integrating company-specific functionalities, enabling retrieval of key performance values and providing extended functionality tailored to organizational requirements.
- TechStack:** React, JavaScript, PHP, Ansible, ShellScripting, PostgreSQL, PowerBI

Software Development Engineer

May 2021 – Aug 2023

BrowserStack

Mumbai, India

- Led a team of four to develop a cost governance platform akin to AWS, utilizing ETL pipelines from Amazon RDS to BigQuery and integrating it with Google Looker Studio, resulting in a 10% reduction in annual infrastructure costs.
- Transitioned BrowserStack's alerting and reporting platform from monolithic to Docker-based Kubernetes microservices, addressing challenges like adapting single-instance features for multi-instance compatibility and intelligent resource management.
- Implemented an enterprise-wide centralized logging framework compliant with GDPR laws, seamlessly pulling data from diverse sources (EC2, Kubernetes, Mac and Windows customer terminals, etc.), resulting in a 15% decrease in MTTR for technical issues.
- Developed and implemented a disk space optimization solution by automating the compression of browser files using terminal scripts, storing them on Amazon S3, resulting in a 30% reduction in disk space usage and efficient on-demand access.
- Enhanced BrowserStack's alerting framework deployment using Vagrant and Ansible, reducing dev setup time by 95%.
- Integrated new OS (Mac, Windows) and browsers on customer terminals, enhancing cross-platform compatibility and service of Browserstack's cloud-based web and mobile testing platform. Upgraded versions of Ruby, Python and JDK on mac terminals and windows VMs resulting in performance improvements and a better user experience for 90% of customers.
- Built data pipelines with Apache Airflow to transfer data seamlessly from local MySQL RDS to AWS S3 and then to Google BigQuery for further analysis, alerting and reporting.
- TechStack:** Docker, Kubernetes, Elasticsearch, Vagrant, Ansible, Redis, AWS(Lambda, EC2, S3, RDS), GCP(BigQuery, Pub/Sub, Looker), Python, SQL

Machine learning Research Assistant

April 2019 – March 2021

VLSI Research Center, IIIT Hyderabad

Hyderabad, India

- Worked on building a Machine learning library of various ML and DL models such as Multi layer perceptron, SVM, Gradient Boosting etc. to predict delays and leakages of gate level topologies, effectively replacing traditional EDA tools
- Publication:** AI/ML Algorithms and Applications in VLSI Design and Technology (Elsevier 2023) - Explores past advancements and future prospects of AI/ML across various abstraction levels in VLSI design such as CGGAN for lithography and Bayesian networks for functional verification.

Academic Projects

Elastic Image Recognition Application on Cloud | Cloud Computing, Python, AWS

Jan 2024 - May 2024

- Developed an elastic IaaS cloud image classification application on AWS with auto scaling to start/stop a maximum of 20 EC2 instances on-demand. Recognition models evaluate images in the queue and cache the results into S3 bucket
- Architected it using Python and FastAPI for the web-tier, capable of handling upto 10K requests concurrently using SQS queues

Distributed Banking System | Distributed Systems, Python, gRPC

Aug 2023 - Dec 2023

- Developed a distributed banking system with gRPC communication for concurrent transactions for multiple customers across branches, featuring client-centric consistency and Lamport logical clock integration.

SQL Engine | Database Systems, C++, SQL

Dec 2020 - May 2021

- Developed a mini SQL Engine in C++ that can parse queries, perform SQL operators like SELECT, WHERE, INSERT, and implemented B+tree based indexing for faster query retrieval.

Achievements and Activities

- Received **Black Belt Award** at Browserstack, given for top 1% of the employees for delivering exceptional results
- Awarded **Dean's list** at IIIT Hyderabad for academic and research merit, given to the top 0.5% of the students
- Guided 50+ students as a Teaching Assistant in Embedded Systems, Electronic Workshop, and Engineering Design courses.