
CAREER SUMMARY

- A diverse professional with proficiency in **Power and Performance Optimization of HPC & AI applications** as well as **Debugging**, possessing **7 years of experience** and a track record of effectively spearheading numerous projects across different organizations.
- An HPC engineer with specialized **expertise in the porting and tuning of parallel scientific workloads on x86 platforms**, including AMD EPYC servers.
- Experience in **tuning the power and performance of AI and deep learning features** on Xeon server processors.

AREAS OF EXPERTISE

- Python Scripting
- Computer Architecture
- Post-Silicon Validation
- Systems Optimization
- Power & Performance Eng.
- Bash Scripting
- AI-DL Frameworks
- Data Analytics
- Benchmarking & Debug
- Linux Tools
- HPC SW Stack
- Automation

PROFESSIONAL EXPERIENCE



Intel, Bangalore, KA
Sr. Performance Engineer

Aug 2022 – Present

- **Led the volume validation of AI-DL features on Sapphire Rapids, Emerald Rapids, and Granite Rapids to assess power and performance.** This involved validating the effectiveness of these features and ensuring that they met specified requirements on each of these hardware platforms.
- **Worked on troubleshooting and identifying the root cause of silicon and platform issues.** This involved debugging the system and analyzing the underlying problems to determine their source and resolutions.
- **Collaborated with multiple teams to optimize AI-DL workload performance on Xeon servers.** This involved tuning the performance of the servers and fine-tuning the workloads to achieve optimal results.
- **Made contributions to different automation framework repositories at Intel** while also expanding automation coverage for key benchmarks related to power usage.



AMD, Bangalore, KA
Sr. Software Engineer

Feb 2019 – Aug 2022

- **Developed Spack recipes** that support the AMD toolchain and simplify the building and running of scientific codes on AMD EPYC servers. **These recipes cover 15 or more HPC applications.**
- Using the AMD CPU toolchain, I successfully **ported over 5 parallel scientific codes and generated a detailed performance benchmarking report.** This report was utilized by the compilers and libraries team to improve the performance of the applications.

- **Developed a E2E benchmark pipeline that validates the functional and performance behavior of HPC applications** using monthly stable releases of Compilers and Libraries. This approach reduced turnaround time for issue resolution, **improving overall productivity of the teams involved.**
- **Assessed more than twenty HPC applications across three toolchains on two generations of AMD EPYC processors (Zen2 and Zen3)** to evaluate software and hardware performance relative to the competition. **This analysis helped in establishing performance goals and benchmarks.**



SecureKloud, Chennai, TN
Sr. Associate – Data Science

June 2016 – Jan 2019

- **Created a video annotation tool that enables frame-level annotation of faces and emotions.** With this tool, we were able to achieve a gold standard dataset with increased accuracy in the annotation while reducing the time to create it by more than 50%.
- **Developed over 10 Python scripts for client APIs that interact with multiple cloud services** and enable loading, storing, and obtaining response data. Additionally, the scripts parse the response data into a readable format.
- **Worked on a proof of concept (POC) for a Natural Language User Interface (NLUI)** that enables users to formulate questions in natural language and receive responses, also in natural language, from an internal database. The NLUI prototype proved effective for smaller queries.
- **Created benchmark reports for sentiment analysis, OCR, and face detection** on cognitive services offered by AWS, GCP, Azure and IBM Cloud. These reports aimed to evaluate performance of these services, providing useful insights on their capabilities.

EDUCATION



M.Tech., Computer Science Engineering (Distinction)
 National Institute of Technology, Puducherry
 Teaching Assistant (NIT), Summer Intern at IIITDM at Chennai.

PROFESSIONAL AFFILIATIONS

- ❖ Contributions to **Spack** (till July 2022): <https://cutt.ly/WcVlv24>
- ❖ Received **Divisional Recognition Award** for work on BKC PnP E2E Automation (Q1 2023) at Intel.
- ❖ Earned company's **Executive Spotlight award** (Q4 2021) for excellent job done in promoting AMD CPU toolchain to ISV, Universities, and other customers.
- ❖ Earned company's **Spotlight award** (Q4 2020) for developing SPACK recipes with AMD Software Toolchain (AOCL) and applications include NAMD, WRF, CP2K, QE and Open FOAM.
- ❖ Certifications: Python Bootcamp, Python for Data Science, High Performance Computing for Scientists and Engineers, Linux Operating System. Etc.
- ❖ **Bagged First Prize** at 14th National level technical Symposium on Palm Vein Technology paper.
- ❖ IBM DB2 Academic Associate in 2013-14.