

RACHANA AITHAL

Atlanta, Georgia ♦ +14708842717 ♦ rachanaaithal88@gmail.com

EDUCATION

Georgia Institute of Technology

Aug 2022 - May 2024

Master of Science, Computer Science

GPA: 4.0/4.0

PES University

Aug 2016 - Jul 2020

Bachelor of Technology, Computer Science

CGPA: 9.53/10

RESEARCH EXPERIENCE

Department of Computer Science, Georgia Tech, *Research*

Jan 2023 - Jun 2023

- Leveraging a cache miss predictor to hide memory access latency.
- Use user-level threads and rapid context switching in user space to mitigate the effects of long memory delays.

Center for Cloud Computing and Big Data, PES University, *Undergraduate Research*

Jan 2018 - Jan 2020

- Engineered Hardware Accelerated Matrix Multipliers on Intel Arria 10, CPU+FPGA platform.
- Co-authored a poster paper titled "*Hardware Accelerated Matrix Multiplication using a 400 MHz Systolic Array on a CPU+FPGA Platform*" presented at *VLSI design conference 2020*, the submission won the best poster paper award in the user design track category
- Developed a *patent pending* "Elastic Pipelines for Data Processing (in hardware)", No. 201941028170 filed at the Indian patent office

Department of Computer Science, PES University, *Undergraduate Thesis*

Aug 2019 - Jun 2020

- Co-authored a paper "*Exploration of Cross-lingual Summarization for Kannada-English Language Pair*", Conference Proceedings of *17th International Conference on Natural Language Processing (ICON 2020)*
- Implemented an Intelligent system that generated a concise and clear summary in English for any given Kannada document and obtained an *accuracy of 67%*
- Generated first ever high-quality Kannada-English dataset using back translation mechanism

WORK EXPERIENCE

Google, *HW Intern*

May 2023 - Aug 2023

- Built a tool for Automatic generation of UVM test benches for given module designs specification.

Amazon, *SDE*

Jul 2020 - Jul 2022

- Designed and developed support for partners to onboard a new type of feature on the Retail Website Detail page
- Built a transpiler to convert code in a flavour of TypeScript to Java
- Was responsible for Retail Website Detail Page preparation for a peak sale event on Amazon worldwide

Amazon, *SDE Intern*

Jan 2020 - Jun 2020

- Worked on Remote Service migration on Retail Website Detail Page, including working on legacy systems in Perl, Mason to migrate to new code stack on spring.

Walmart Labs, *SDE Intern*

May 2019-July 2019

- Contributed to the development of the B2B website in India, included working on SAP, Spring Boot, and basic Hybris

PROJECTS

- Implemented **fast regular expression matching on FPGAs** using Nondeterministic Finite Automata(NFA)
- Built **Simple compiler** for JS structures like if-else ladder and do-while loop using Lex and Yacc tools
- Built **NLP preprocessing library** in C
- Designed and developed pipe stage modules on FPGAs as an alternative for FIFO queues for data transfer, along with splitter and merger extensions for better data input and output.

KEY ACHIEVEMENTS

- Recipient of C.N.R. Rao Merit Scholarship for **6 semesters** and Distinction award for **7 semesters** at PESU
- **Runner-up** in the Hactober fest, a coding competition by conducted by ACM-W, PESU
- Volunteer at the Peer Teaching Program at PESU to help other students with their academics

SKILLS

Programming Languages Tools

Python, C/C++, SQL, Verilog, HTML, JS, PHP, Django, Java
Arduino, Intel Quartus, Shell