PRAJWAL SOMENDYAPANAHALLI VENKATESHMURTHY

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EDUCATION

Illinois Institute of Technology   **Chicago, IL**
Master of Computer Science, **GPA: 4.00/4.00**   *01/2023 - 12/2024*
Related Coursework: Advanced Database Organization, Computer Networks, Big Data Technologies

JSS Academy of Technical Education   **Bengaluru, KA**
Bachelor of Information Science, **Cumulative GPA: 3.23/4.00**   *06/2015 - 06/2019*

RESEARCH EXPERIENCE

Research Student — RES-MATCH Fall 2023   **Chicago, IL**
Illinois Institute of Technology   *09/2023-12/2023*

- Spearheaded the *Distributed Computation for Light Propagation Modeling* project under the mentorship of Professor Dr. Nik Sultana, achieving a holistic overhaul of simulation efficiency.
- Engineered and integrated virtual C/C++ functions within fat-tree network model switches, driving granular packet processing and analysis during simulations. Led documentation and open-sourced the research for broader community impact.
- Successfully embedded a Python interpreter within the CODES simulation system, enhancing the system's programmability and expanding its modeling capabilities. Involved experts from Argonne National Laboratory to ensure the project's precision and applicability.

WORK EXPERIENCE

Certa   **Saratoga, CA (Remote)**
Mid Frontend Engineer   *03/2022-11/2022*

- Oversaw the migration of the codebase from React 16 to 18 and updated React Query from v2 to v4, resulting in a 10% improvement in app responsiveness and a 30% reduction in load times.
- Spearheaded the implementation of in-house tools and enhanced test coverage for frontend components from 50% to 90%, leading to almost 70% reduction in post-release defects and enhanced overall product stability.
- Employed modern technologies to optimize the software performance by 40%, resulting in a 50% increase in user engagement due to enhanced UI/UX. Additionally, developed in-house scripts that enhanced developer productivity by nearly 50%.

Snapwiz Edutech India (acquired by GoGuardian)   **Bengaluru, IN (Hybrid)**
Software Engineer   *08/2019-03/2022*

- Implemented advanced performance optimization techniques, including front-end bundle optimization and route splitting, resulting in a remarkable 50% reduction in both application load time and bundle size.
- Played a pivotal role in the development of critical product features, including a sophisticated subscription module and playlist module, contributing to the product's functionality and user experience.
- Leveraged expertise in JavaScript, React.js, Node.js, Firebase, Jenkins, Elastic Search, MongoDB and Cypress to create custom integrations that met unique project requirements and exceeded customer expectations & elevated code quality by implementing rigorous unit testing practices, resulting in a 20% increase in code coverage.

PROJECTS

- **Database Manager** — A comprehensive data management system encompassing a Storage Manager for pagelevel operations, a Buffer Manager with LRU and FIFO caching strategies, and a Record Manager for table based CRUD operations and schema handling.
- **Neural Image Captioner** — Implemented a Neural Image Caption Generation model with Visual Attention using PyTorch, leveraging the COCO dataset. The model integrates a pre-trained encoder and decoder with attention mechanisms to dynamically focus on image regions during captioning to generate natural language descriptions of images.
- **Webfolio & Blog** — Personal webfolio & blog built with Next.js, Chakra UI and MDX, featuring a responsive design, analytics, and blog section; hosted on Vercel and open-sourced under the MIT License.
- **Text Memo** — A is a straightforward note-taking app designed for simplicity and efficiency. This app is built for Android OS using java.

SKILLS

Languages: C, C++, Shell Scripting, Python, Java, Go, SQL, HTML5, CSS3, JavaScript, TypeScript, Node.js
Frameworks & Tools: React.js, Vue.js, AngularJs, Next.js, Express.js, PyTorch, Jest, RTL, Cypress, GraphQL
Databases: MySQL, PostgreSQL, Nginx, Redis, MongoDB, Dynamo DB, Elastic Search, Apache Spark, Hive
Cloud, DevOps & Version Control: AWS (EC2, S3, CloudWatch, SQS, SNS, Lambda), Docker, Git, Github, Jenkins, CI/CD pipelines
Systems & Design: Problem Solving, Distributed Networks, Software Architecture, Debugging Techniques, Performance Analysis
Soft Skills: Communication, Collaboration, Adaptability, Leadership, Growth Mindset, Passion for Innovation, Teamwork