

Nitin Goyal

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Education

University of Florida, M.S. in Computer Engineering

Aug 2023 – May 2025

- **Relevant Coursework:** Principles of Computer System Design, Cloud Comp Systems And Applications, Virtual Machines, Cloud Comp Systems Management, Distributed Operating Systems Principles

Projects

- **Performance characterization of virtualization technologies** [*In-progress*] Characterizing KVM, Xen, and Docker performance trade-offs through industry-standard benchmarks in distributed cloud compute settings in virtualization setups on CloudLab, evaluating CPU and memory performance at both VM and host levels.
- **Topology management in peer-to-peer systems** [[github](#)][[report](#)] Implemented and evaluated powerful [T-man](#) protocol in Python, leveraging efficient gossip-based mechanisms for constructing overlay topologies suitable for large-scale distributed data management.
- **NFS like distributed file system** [[github](#)][[report](#)] Designed and implemented a distributed fault-tolerant file system in Python, leveraging RAID-5 for data and parity distribution across a 4-server cluster. This system utilizes custom data structures and naming layers to enable basic file operations, promoting scalability and data recovery capabilities.
- **AI powered E-commerce product catalog** Web product catalog that refreshes based on the information provided by the user to the sales chatbot. The system utilizes LangChain based conversational AI with gpt-3.5-turbo API.

Skills

Programming/Scripting Languages

JavaScript, Typescript, Java, Python, CSS, HTML, Bash

Frameworks and Tools

MongoDB, Express.JS, React.JS, Node.JS, i18next, SCSS, Git, Docker, Postgresql

Others

DevOps - Docker, Jenkins, Azure DevOps; Cloud - AWS, Salesforce

Professional Experience

Sage Group PLC - Senior Software Engineer

Jan 2022 – Aug 2023

- Revamped and streamlined the critical app data retrieval, eg. locale, access and permissions, resulting in a 20% performant load.
- Implemented frontend support for internationalization (multi-currency and multi-language) using i18next framework, unlocking 3 geographic markets for product growth.
- Developed workflow features based on magic link authentication in React to make it easy for a third party to access limited information without needing a sign-up.
- Utilized design patterns such as headless-ui and factory pattern to build scalable styled library components with MUI, SCSS and React.JS. Provided configurability to support more than 70 financial data views across 3 products.
- Reduced standup time by serving as the scrum master (**secondary role**) for a team of 10 engineers by 50%. Prepared sprint progress reports and assisted in retrospective meetings to identify and mitigate cross-functional blockers.
- Recognized for comprehensive impact analysis, facilitating actionable planning and estimations; and for highlighting probable blockers and dependencies early.

Tata Consultancy Services Ltd - System Engineer

Jul 2019 – Jan 2022

- Built automated order feasibility algorithms, commercial integrations and provisioning services for a B2B telecom client in Salesforce CRM.
- Developed REST apis and cron jobs to integrate CRM data to serve external services such as web dashboards, to provide up-to-date consolidated view about customer services and other stats.
- Onboarded and trained new hires in proprietary ordering systems UI framework based on JavaScript. Lead the team to refactor over 30% of the UI to update the underlying packages and API architecture.
- Retrofitted APIs and integrations to accommodate revamped schema of the proprietary (CloudSense) package; collaborated with downstream backend teams to ensure smooth transition.
- Built CI/CD based development workflow using Azure DevOps pipelines with docker and Salesforce ci-cd tooling to facilitate automated deployments across cloud instances leading to reduction of 70% in monitoring efforts and human error.
- Built a dockerized Node.js based testing utility for proprietary UI packages with easy to run configs and and performed POC.

Extra-curricular

- [*current*] **External Events Operations Team**, University of Florida Athletic Association
- **Vice President**, Student Chapter - International Society of Automation
- **Event coordinator**, Student Chapter - TEDx