

# Pratul Muthuraja

Portfolio: [pratulmuthuraja.com](https://pratulmuthuraja.com)

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## EDUCATION

- Illinois Insitute of Technology** Chicago, USA  
Master of Computer Science  
January 2021 - May 2023  
Courses: Big Data, Cloud Computing, Software Engineering, Virtual Machines
- Anna University** Chennai, India  
Master of Computer Science  
June 2014 - May 2018  
Courses: Operating Systems, Data Structures, Analysis Of Algorithms, Networking, Databases

## SKILLS

- Languages:** Python, Go, JavaScript, SQL, Bash, HTML/CSS
- Frameworks:** Django, Flask, ReactJS, NodeJS, LAMP, Gatsby
- Tools:** Kubernetes, Docker, GIT, PostgreSQL, MySQL, SQLite, NGINX, Helm, Gatsby, Hugo, Jenkins, ChatGPT
- Platforms:** Linux, Web, Mac, AWS, GCP
- Soft Skills:** Leadership, Event Management, Writing, Public Speaking, Time Management

## EXPERIENCE

- Armour Chapter of Triangle** Chicago, USA  
Web Developer (Volunteer, Full-time) November 2023 - November 2024
  - Tech Stack:** React.js, Nodejs, Javascript, TailwindCSS, Framer Motion, PostgreSQL.
  - Develop Website:** Developed responsive single page application website using Javascript and React.js leveraging TailwindCSS.
  - Code Quality:** Ensured code quality and maintenance by writing unit test using Jest.
  - Converted Designs:** Collaborated with UI/UX team to create interfaces and converted prototypes to React web pages.
- Illinois Institute of Technology** Chicago, USA  
Graduate Student Ambassador (Part-time) August 2021 - December 2022
  - Data Analysis:** Managed databases and generated reports on Salesforce; Analyzed prospective student data to improve response to Graduate Discover Day event resulting in 19% growth of incoming graduate students compared to 2020.
  - Leadership:** Strong leadership and collaboration skills evidenced by organizing recruitment activities through campus tours, student panel, and events for the Graduate Admissions Office showing 37% better response rate.
- Narayana Glass Company** Madurai, India  
Graduate Student Ambassador (Full-time) June 2018 - December 2020
  - Data Analysis:** Managed databases and generated reports on Salesforce; Analyzed prospective student data to improve response to Graduate Discover Day event resulting in 19% growth of incoming graduate students compared to 2020.
  - Leadership:** Strong leadership and collaboration skills evidenced by organizing recruitment activities through campus tours, student panel, and events for the Graduate Admissions Office showing 37% better response rate.

## PROJECTS

- Database Performance Analysis Tool:** (Graduate Research Project) Built an automated tool to deploy Cassandra, MongoDB and CouchDB clusters on AWS utilizing Terraform and Python scripts, resulting in a reduction in deployment time by 75%. Conducted automated rigorous testing in 2, 4, and 8 cluster modes to evaluate performance based on pre-defined criteria and recorded results using Matplotlib graphs for Data Visualization. Tech: Python, Cassandra, MongoDB, CouchDB, Terraform.
- Home Lab:** Designed and built a 2 node cluster running Proxmox VE to learn, test, and experiment with self-hosting and server management. Honed automation skills and achieved 50% reduced reliance on cloud services. Implemented logging and monitoring using Loki and Grafana. Used Open Media Vault to convert HDD array to NAS. Set up remote access through Cloudflared Tunnel and used NGINX proxy manager to act as a reverse proxy. Tech Stack: Proxmox VE, Debian, Docker, Kubernetes, Bash, Loki, Grafana, Cloudflared Tunnel, NGINX.
- Portfolio Website:** Built portfolio website using Gatsby, an opensource static site generator considering its plentiful plugins library, speed, ease of integration, and security to showcase technical skills, experience, personal projects, and achievements. Tech: Gatsby, Javascript, React.js.
- Open-source Contributor - Meshery:** Have been contributing to Meshery, an open-source, cloud-native management plane designed to help with the deployment, operation, and lifecycle management of service meshes and cloud-native infrastructure since March 2025. Tech: Gatsby, React.js, Go.
- Search Engine and Social Network(Web Development, Web Crawler, Search):** Created from scratch a social network and a search engine based on the idea of integrating Facebook and Google. The launched website was among top 1000 websites in India during 2012-2013. Tech: PHP, MySQL, HTML, CSS, WebSockets, JavaScript, RSS, XML ( May '12)