# Gokhulnath Thirumaran

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## EDUCATION

**University of Illinois Chicago**                                                                           **Chicago, Illinois**
*Master of Science in Computer Science, CGPA: 4/4*                                                           *May 2026*
**Sri Sivasubramaniya Nadar College of Engineering**                                                        **Chennai, India**
*Bachelor of Engineering Computer Science & Engineering, CGPA: 3.4/4*                                        *June 2022*

## SKILLS

- **Languages and Tools**: Java, Python, C, C++, SQL, JavaScript, HTML, CSS, NodeJS, Git, Android Studio, Raspberry Pi
- **Libraries and Frameworks:** MERN, Django, SpringBoot, VueJS, Postman, Junit, Selenium, Flask, Next.js, Redux, PyTorch, Keras, TensorFlow, OpenCV, PostGres, RESTful APIs, GraphQL, JWT, OAuth, SonarQube, FastApi, LangChain, Pydantic, LLM Fine-tuning, Vector DBs, NLP Model Deployment
- **Cloud & Devops:**  AWS, Google Cloud, Firebase, DigitalOcean, Vercel, Heroku, Netlify, Oracle, Hugging face, Docker, Terraform, GitLab CI, GitHub Actions, Datadog, Splunk, Git, NPM, Yarn.

## WORK EXPERIENCE

**Chargebee (A billing SAAS fintech)**                                                                      **Chennai, India**
*Software Engineer (Atomic Pricing Team)*                                                                   *Dec 2023 – August 2024*

- Built a microservice from scratch called Atomic Pricing as a full-stack developer, a no-code microservice using *Spring* for backend API development and *Next.js* for a responsive frontend, hosted on *AWS* and *Vercel* for scalability and performance.
- Implemented *RESTful APIs* to enable real-time pricing updates and dynamic page generation for SaaS clients.
- Deployed *Datadog* and *Splunk* for monitoring and integrated AI into the *GitHub CI/CD* pipeline to minimize manual interaction by automating pull request reviews, adding auto-comments, providing code suggestions, and ensuring continuous monitoring and deployment.
- Worked closely with cross-functional teams, including product development, marketing, and client success, to refine and optimize the product for market readiness, ensuring alignment with customer needs and business objectives.
- Engaged in customer acquisition, support, and bug report calls, managing the customer feedback funnel through regular email communication to address inquiries and ensure continuous product improvement.

*Software Engineer (Embedded Payments Team)*                                                                *August 2022 – Dec 2023*

- Integrated services like refunds, onboarding merchants, front and back-end payment dashboards, and ACH integration
- Built a payments statistics dashboard and onboarded a new payment facilitator into payments for the billing product by enabling a multi-Payment Facilitator system; implemented an account updater for all payfac
- Reduced failure rate by over 80% by building an AI-based smart routing algorithm which also eliminates pre-predicted failures as part of an internal hackathon
- Responsible for full stack development and creating test cases for the features

*Software Engineering Intern*                                                                                *January – June 2022*

- Implemented an in-house reconciliation application; began developing a refund and email notification system

**Independent Projects (Portfolio)**                                                                        **Chennai, India**
*Freelance Web and Software Developer*                                                                       *November 2020 – Present*

- Executed 8 projects on websites and product development for small to large businesses across sectors such as healthcare, e-commerce, design, advertisements and marketing, travel, and logistics.
- Developed a variety of websites with tight and complex design constraints, such as a dynamic and no-code-editable website, e-commerce web and mobile applications, and portfolio websites for clients based in the UK and US.
- Extensively used and developed expertise in full-stack development: MERN, Spring Boot, Vue.js, React, Next.js, AWS, Vercel, DigitalOcean, and VPS deployment in various global locations.
- Implemented error monitoring and later-stage monitoring solutions for seamless product performance and maintenance.

## CONFERENCE PAPER PRESENTATIONS

- **Thirumaran, G**., Mahendran, G. and Shanckin, S., 2023, Gaussian Processes for Automating Model Selection, 3rd International Conference on Signal & Data Processing 2023; VIT Bhopal, November 3-4 2023 (Paper accepted to be published by Springer in the conference proceedings)
- Mahendran, G., **Thirumaran, G.**, Ali, S. I., Jadon, V. R., 2023, NAS for Automated ML Deployment on Extreme Edge Devices, 3rd International Conference on Signal & Data Processing 2023; VIT Bhopal, November 3-4 2023 (Paper accepted to be published by Springer in the conference proceedings)
- Mahendran, G., **Thirumaran, G.**, Srivastava, P., and Riwat, D., 2023, A Computational Analysis of Climate Change Sentiment on Social Media, 3rd International Conference on Signal & Data Processing 2023; VIT Bhopal, November 3-4 2023 (Paper accepted to be published by Springer in the conference proceedings)

## RESEARCH EXPERIENCE

**Enhanced modeling of wine preferences using physicochemical properties** *August 2023 – July 2024*
- Developed a poor-dataset prediction model for best chemical proportion prediction using deep learning and machine learning methods; collaborated with faculty in VIT University, Chennai and IIT Guwahati
- Developed an enhanced predictive model for wine taste preferences, surpassing benchmarks established in referenced research using one shot learning, SVM and multi perceptron neural network

## ACADEMIC PROJECTS

***Tumor size estimation and 3D model viewing using deep learning** | TensorFlow, Keras, OpenCV* *January - August 2022*
- Studied overall efficacy and accuracy of using deep learning to estimate tumor size by using DICOM scan images
- Used transfer learning along with VGG CNN model and ResUNet model to detect, segment and map multiple tumors in a single brain with 92% accuracy

**Real-time data extraction using OCR** | *Android Studio, Java, Firebase, Tesseract, ML, JSON, Git* *January - July 2021*
- Led a team of 3 to develop an Android application to scan drivers' licenses and convert card information from JSON to API format using images of the documents to collect and verify a person's identity easily
- Used Optical Character Recognition (OCR) to conduct real-time data extraction; currently supported in iOS and Android, can be scaled up so it can be used on the web

**Zinger: an in-campus food delivery app** | *Android Studio, Java, XML, Firebase, Rest API, JSON, Git* *March - October 2020*
- Developed a food delivery and pick-up service mobile app for college and company campus

**Automated attendance system** | *Deep Learning, TensorFlow, OpenCV, Python* *January - December 2019*
- Designed an attendance system application that automates attendance for students by recognising faces and RFID tags (in student ID cards) to note the attendance of students accurately and efficiently, and update the professor's attendance database

## ENTREPRENEURSHIP

**The Savvy Saints (event-management initiative)** | *Co-founder*
- Led a team and organized 20+ events, which included college cultural events, talk shows, corporate events, farewells, etc. and generated a revenue of USD 50,000 in 2022
- Developing a product to visualize event spaces and conduct virtual tours of venues for customers to review these spaces

**The Scribble Art (early phase)** | *Co-founder*
- Founded a design company to help creators brand and merchandise clothing, stickers, posters, and prints
- Developed an AI-powered software for customers without design knowledge to create their clothing brands and digital prints

## PROFESSIONAL DEVELOPMENT (COURSES)

- Front-End Web UI Frameworks and ToolsL Bootstrap 4; Data Science Orientation; Programming Foundations with JavaScript; HTML and CSS (Coursera) 2020
- Programming in C/C++ (FIIT); Programming in JAVA and Python for Data Science (NIIT Academic Council) 2018

## EXTRACURRICULAR ACTIVITIES

**Lakshya (Entrepreneurship Development Cell of Sri Subramaniya Nadar College)**
*Organizer (2019-2021), Core member (2021-2022)* *June 2019 – June 2022*
- Conducted 20+ events, including college-wide events that included management of 200+ volunteers, such as Udhaan (market simulation for products and bids) and SYCon (a TedX-style talk show) with CEOs, film actors, and entrepreneurs
- Led a team to develop a ticketing application with features (admin dashboard, referrals, buying and selling tickets, transfer tickets, entry and exit validation, etc.) for our college, with 100% uptime; achieved sales of 1,000+ tickets within a month

*Member of Photography Club, Android and Web Development Club* *July 2018 – June 2021*

## VOLUNTEERING

**Lure of Life** **Chennai, India**
*Co-founder* *July 2020 – present*
- Led a team of 15 volunteers in teaching communication skills to 20 homeless and slum-dwelling children across 5 neighborhoods through "The Bridge Project"

**Ullas Trust** **Thiruporur, India**
*NSS student volunteer* *November 2018 – June 2022*
- Educated government school students on soft skills like communication, personality development, teamwork, leadership and management skills; taught multiple classes at a government-run higher secondary school for girls in Thiruporur, Tamil Nadu