# Sai Karthik Ammanamanchi

5w, 524 W 123rd St, New York, NY 10027
(646) 238-7410 | sa3979@columbia.edu | github.com/gottacodeemall
linkedin.com/in/karthik-ammanamanchi

## EDUCATION

**Columbia University**                                                                                   New York, NY
*Master of Science in Computer Science*                                                              Dec 2022
- Relevant Course work: Big data and Cloud Computing, Natural Language Processing, Analysis of Algorithms

**National Institute of Technology, Calicut**                                              Kozhikode, Kerala
*Bachelor of Technology in Computer Science, GPA: 8.8/10*                                    May 2019
- Relevant Course work: Operating Systems, Computer Architecture, Software Engineering, Networks, Compilers, Security, Databases, Data Structures and Algorithms, Artificial Intelligence

## WORK EXPERIENCE

**Microsoft**                                                                                          Hyderabad, India
*Software Engineer - Full Stack*                                                                  Jul 2019 - Aug 2021
- Developed, tested, and maintained User Interfaces, Server APIs, and Stored Procedures across 3 projects supporting the Recruiting Ecosystem
- Designed and implemented: Custom Role and Authorization management, Live and persistent notification management, Distributed Caching, Incident management system and integration of Power BI report Embed scenarios
- Diagnosed and resolved a memory leak causing high response times and forceful restarts of application servers blocking the UAT release
- Attained 20% reduction in costs and 80% faster report render times by optimizing partitioning and indexing strategies and setting up fortnightly defragmentation and auto-indexing scripts
- Saved over 100 hours of developer time by automating accessibility testing of application by integrating extensive checks at code, pipeline, and deployment stages
- Initiated and engineered development of a secure encryption-decryption tool enabling team to debug issues in application in less than 2 minutes achieving a 90% improvement

**Microsoft**                                                                                          Hyderabad, India
*Software Engineer Intern - Backend*                                                            May 2018 - Jul 2018
- Revamped rendering engine for Microsoft's emailing service by developing and implementing a POC enabling 7 billion localized, user-specific, and analytics-enabled Emails to be delivered every month to customers globally

**M[Labs]**                                                                                              Kozhikode, Kerala
*Computer Vision Intern*                                                                            Feb 2018 - May 2019
- Created an application, utilizing store cameras to recognize and track customers, maintain a virtual cart, and complete billing
- Achieved a mAP score of 96.2 for Object Detection (SSD), 76.7% accuracy for Activity Detection (LSTM), and a 70 percent accuracy for Pose Estimation (Multi-Person Human Pose Estimator) for a 10-pixel threshold for joint locations

## TECHNICAL SKILLS

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|---|---|
| **Programming** | C#, C++, JavaScript, Python, Java |
| **Frameworks** | React, Redux, .NET Framework, .NET Core |
| **Databases** | SQL (SQL Server), NoSQL (Cosmos DB) |
| **Cloud Technologies** | Azure (Redis, CDN, Service Bus, APIM, Load Balancers, Compute, Storage, Databases) |

## PROJECTS

**Coding With Seniors**                                                                             Sep 2018 - Jan 2019
- Developed a web platform using Django to host intra-college coding competitions, track ratings, share reading material, and connect with people

**Art Gallery Problem using Seidel Triangulation**                                       Feb 2018 - Apr 2018
- Visualized solution to art gallery problem by first applying Seidel's algorithm onto art gallery (polygon) to generate triangulated polygons and then applying vertex 3 coloring to obtain locations of guards

**Experimental Operating System**                                                              Aug 2017 - Nov 2017
- Implemented multi-processing via timer-based interrupts, Round Robin scheduling, address translation, multi-level page tables, and system calls to create a minimalist operating system

## AWARDS

- Qualified for and represented university at ACM ICPC Kolkata Kanpur Regionals 2018
- Runner up and won INR 15000 in JMR Infotech Hackathon for hack – Improved Sentiment Analysis on tweets
- Secured university rank 1 and national rank 95 out of 2245 teams in Flipkart GRiD AI ML Challenge 2019