SIDDHARRTH PRIYADHARSAN MUTHUSAMY

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Education

Texas A&M University   **August 2023 - present**
Master of Computer Science (MCS)   *College Station, Texas*

Indian Institute of Technology Kharagpur   **July 2014 - May 2018**
*Bachelor of Technology in **Computer Science and Engineering** (CGPA : **8.58**)*   *West Bengal, India*

Experience

Amazon   **December 2022 – July 2023**
Software Development Engineer 2   *Bengaluru, India*

- One of the founding engineers to build the platform to facilitate different capabilities for Astro robot in Amazon Devices organization
- Worked on developing the build and release pipelines to support continuous integration and continuous deployment for the robots

Microsoft   **September 2021 – November 2022**
Software Engineer 2   *Bengaluru, India*

- Implemented **Progressive Web Application** (PWA) to provide native-app experience and offline support for **PowerApps Portals**, thus significantly expanding the mobile user base for our product by **10x**
- Implemented **client side telemetry** pipeline to log client side actions, anomalies and performance metrics for **PowerApps Portals**
- Handling development and runtime life-cycle related operations that include building new features, architecture design, site reliability and scalability, monitoring systems, building CI/CD pipelines, release devOps, supportability enhancements, bug fixing and customer engagement (on-call)
- Mentorship and developer onboarding for junior Engineers

Microsoft   **June 2018 – August 2021**
Software Engineer   *Bengaluru, India*

Worked on building **PowerApps Portals**, a no-code low-code cloud-based platform that enables customers to quickly build mobile and web applications which scale to millions of users instantaneously. Drove some major features of Portals that include the ones mentioned below:

- **Self-serve Diagnostics system** to enable customers resolve portal issues and customization errors on their own, and this feature brought **60%** reduction in the number of support tickets raised on Microsoft support
- **Licensing and consumption service**, a microservice to track customers' usage of our product for analytics and billing purposes, and this service was critical for our product's revenue generation. As part of this, I implemented crone jobs and APIs that were consumed by our partner teams to build user consumption and audit dashboards
- **Staggered Release Pipeline** for release deployments, that reduced the blast radius of regressions by **80%**
- **Code Authorization Flow** and other Authentication related functionalities based on OpenID Connect, OAuth2, SAML protocols

Microsoft   **May 2017 – July 2017**
Software Engineering Intern   *Hyderabad, India*

- Developed an **Intelligent Sales Assistant** (chatbot) for **Microsoft Teams** to assist **Dynamics 365** salespeople in their sales life-cycle operations
- Language model creation and training to identify the entities and intent of the user's textual / voice input
- Profile creation for customers by just scanning their business cards, using image processing and data classification
- Sentimental analysis of customer-related Twitter tweets for Lead score prediction
- Auto-population of customer details by leveraging their social media accounts
- **Pre-Placement Offer** from Microsoft India Development Center

Projects

Interactive Learning Application for Dyslexic children | *Android, Java*   **June 2017 - May 2018**
- This app aims to help Dyslexic children overcome the difficulties faced while reading and writing English words and associated sentences
- Natural Language Generation and Handwriting Recognition implementation
- This project has been selected for **Institute Patent filing** by IIT Kharagpur

IoT application involving eye tracking using laptop web camera   **January 2017 - April 2017**
- This web application is designed to open bookmarked tabs in the web browser by tracking our eye movement using the laptop's web-camera
- Used WebGazer (JS library) to infer the eye-gaze locations of web visitors on a page in real time

Document Summarization   **March 2018 - April 2018**
- Generation of a Summary of maximum n words from a given list of documents
- Degree Centrality and Text Rank algorithms used for summarization and ROUGE used for Results Evaluation

Soccer player tracking   **September 2017 - October 2017**
- An application to track the players in soccer broadcast videos
- Developed under the supervision of Prof. Partha Pratim Das, IIT Kharagpur

Custom Linux shell   **January 2017 - February 2017**
- Linux command interpreter (Shell) developed in C language
- Tested successfully in Ubuntu and Arch Linux

Note: All my projects can be checked out at *github.com/siddumsp1997*

Technical Skills

Languages: C, C++, C#, Java, Python, Scala, Bash
Web: React, JavaScript, JQuery, HTML, CSS
Technologies/Frameworks: .NET, Django, Spark, Azure Web Services, Cosmos DB, Azure SQL, Microsoft Bot Framework, Azure DevOps (CI/CD pipelines), Azure Service Bus (Message Queue), Power Automate, Azure Cognitive Services, Workbox, Git, REST APIs
Developer Tools: Visual Studio, Android Studio, Apache Spark, Eclipse, Unity

Key courses

Computer Science: Data Structures and Algorithms, Operating Systems, Compilers, Networks, Database Management Systems, Advanced Machine Learning, Computer Organization and Architecture, Artificial Intelligence, Information Retrieval, Image Processing, Educational Data Analytics, Discrete Mathematics, Software Engineering, Intelligent Game Design, Theory of Computation, Formal Language and Automata Theory, Principles of Programming Languages
Mathematics: Numerical Analysis, Complex Analysis, Probability and Statistics, Differential Equations, Linear Algebra, Matrix Algebra