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NIKHIL MARYALA

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EMPLOYMENT

Microsoft Corporation **Software Engineer** **July 2017 – July 2019**

Office Group - Kaizala

- Worked on a secure, highly scalable mobile chat/messaging platform called *Kaizala* designed for large groups.
- I am responsible for Large group components, latency and database optimization. (*SQL, Caching, RESTful APIs*)
- Built infrastructure components like Bucketization, efficient caching for large groups, with 100s of thousands of users.
- Optimized performance of the system through a novel local storage system to reduce database load by **30%**. (*C#*)
- Migrated various service entities from legacy data store to Microsoft Substrate and SQL without any downtime.
- Technology Stack: C#, Azure, Redis, SQL, RESTful APIs, Microsoft Substrate, Azure Table Storage

Microsoft Corporation **Software Engineer Intern** **May 2016 – July 2016**

- *Bing Places* is a web mapping service provided as a part of Microsoft's Bing suite of search engines.
- Worked in *Bing Places* team to develop an android application from scratch to work with the existing APIs. (*Android*)
- Designed and developed the android application to make the product accessible for moving business owners to cloud.
- Implemented AAD authentication, GCM notifications and some battery optimizations. (*Android, RESTful APIs*)

Triveni Labs (Now Wishbook.io) **Software Engineer Intern** **May 2015 – July 2015**

- Implemented Custom Search in the e-commerce website, to enable search for the products using the description. (*PHP*)
- Added Reverse Image Search to enable searching using images. (*RESTful APIs*)
- Worked in Magento platform, with PHP as the main language. (*PHP, Magento*, *HTML*)

EDUCATION

University of Massachusetts **Amherst, MA** **Fall 2019 – May 2021**

- Master of Science in College of Information and Computer Science (CICS).
- Graduate Coursework: Artificial Neural Networks; Reinforcement Learning; Systems for Data Science.

Indian Institute of Technology Madras **Chennai, India** **Fall 2013 – May 2017**

- Bachelor of Technology in Computer Science and Engineering.
- Undergraduate Coursework: Operating Systems; Databases; Algorithms; Programming Languages; Comp. Architecture; Calculus I; Calculus II; Artificial Intelligence; Pattern Recognition.

TECHNICAL EXPERIENCE

Projects

- **GooPi – Search Engine** (2019). Built a search engine in Apache Spark to create forward and inverted index in PySpark. Files are stored in HDFS after scraping the web for better file management. Used RocksDB for storing the inverted index and hosted a Flask server to server http requests through browser or Postman. Supports multi-word queries.
- **Non-Linear Kernel Based C-SVM** (2016). Built a non-linear classification system using Gaussian Kernel from scratch to apply it to non-linearly separable data and built a multilayered feedforward neural network to benchmark accuracy. Performed PCA and obtained an accuracy of 89.3% accuracy on overlapping data and 100% on non-overlapping data.
- **AI Bot for Othello** (2015). Programmed a bot using a game tree to foresee the users' moves and optimized it using Principal Variation Search (Negascout). Tinkered with heuristics like good move ordering, selective search.

ADDITIONAL EXPERIENCE AND AWARDS

- **Promotion:** Promoted to **Level 60** from Level 59 within one year, for my contributions in group-user management.
- **Patents:** Developed two novel ideas in messaging systems and applied for **two** patents, which are approved by Microsoft. (MS# 405864-US-NP and MS# 405866-US-NP).
- **Scholarship**: Awarded Golden Jubilee Alumni Award for 4 consecutive years of my undergraduate studies.
- **Leadership**: Best Zonal Volunteer for YouthForSeva-2019. Department Legislator at Student Legislative Council, IITM.

Languages and Technologies

- Languages: C#.NET, C++, C, Java, SQL, Python, HTML, PHP, R; Libraries: Numpy, Jupyter, Matplotlib
- Frameworks: Hadoop (MapReduce), Spark, RESTful APIs, Azure Compute, MongoDB, Redis
- Technologies: Visual Studio, Microsoft SQL Server, Eclipse, Android Studio, R Studio, Git, Postman, Matlab