



# TIROSHAN MADHUSHANKA



tiroshanm.github.io



/tiroshanm



@tiroshanm

## Skills

C# | .NET | Java | Python | C | Scala | PigLatin | CosmosDB | MySQL | HBase | Redis | NoSQL | Hadoop | Kafka | NiFi | Flask | Docker | Azure | AWS | Cloud Computing | CI/CD | XUnit | PigUnit | Kubernetes | Istio | Unit Testing | Load Testing | A/B Testing | OOP | Git | Microservices | Distributed Systems | Backend | Research | DevOps | English – professional proficiency or above

## Experience

### AI Research Assistant - National Institute of Informatics (NII)

Tokyo, JP 10/2020 - Current

- Conduct Artificial Intelligence related researcher on Knowledge Graph Embedding and Knowledge Transferring.

### Lead Technical Engineer - Rozie AI

Durham, NC, USA 01/2018 - Current

- Lead the design and development of multiple enterprise-level microservice applications of Customer Experience Manage, driving Rozie AI startup company to reach \$10 million of revenue every year using the latest technologies of Azure, C#, .NET, Cosmos DB, Azure Functions, Web Application, Logic Applications, Container, Key Vault, and Kubernetes.
- Design and implement scalable APIs and background workers for managing customer related request, push notifications and compensation handling using .net Core, Python, Web Applications, and other Azure cloud technologies that serve millions of customer requests daily.
- Lead the development of several products E2E, from identifying system requirements and partner dependencies to workload balancing, software implementation, engineering, testing, and configuring metrics, alarms, monitors, and dashboards.
- Enrich system metrics by integrating the platforms with telemetry; facilitated in-depth logging by correlating APIs with vector contexts.
- Continuous Integration/Deployment Pipeline Integration, pull requests, code reviews, load/stress testing, unit/integration/e2e testing.

### Senior Software/Data Science Engineer - Zone24x7 Inc.

San Jose, CA, USA 04/2015 - 12/2017

- Designed and implemented omnichannel personalized recommendation system for tier 1 retailer enriching the customer experience in e-commerce platforms, using Python, Scala, Pig Latin, and Hadoop.
- Initiated Zone Data Science Team: Engineering lead for designing and developing the recommendation platform for e-commerce platform.
- Designed pipelines for ETL tasks to ingest data from POS data and click stream data and generated recommendations based on various customer patterns using Camus, NiFi and Pig Latin.
- Implemented central enterprise level recommendation controller using Multi-Arm Bandit Algorithm.
- Engineering owner for the Hadoop Cluster.

### Software Engineer, Intern - Omobio

Colombo, SL 11/2013 - 06/2014

- Digital Add Reach: Implemented bulk SMS retry component using Erlang FSM and Redis Cache.

## Education

### Doctor of Philosophy

- The Graduate University for Advanced Studies, SOKENDAI

Tokyo, JP 10/2020 - Current

- Major in Informatics and Artificial Intelligence.

### Master of Informatics

- The Graduate University for Advanced Studies, SOKENDAI

Tokyo, JP 10/2020 - 10/2022

- Major in Informatics and Artificial Intelligence.

### Bachelor of Science of Engineering

- University of Moratuwa

Moratuwa, SL 06/2010 - 04/2015

- Major in Computer Science and Engineering.

## Publications

### IEA/AIE 2022

- MDN Caching: A strategy to generate quality negatives for knowledge graph embedding.

### AI-Cybersec@SGAI 2021

- A Novel Anomaly Detection Approach to Secure APIs from Cyberattacks .

### ICACT 2020

- Building Automation System to Optimize Energy Utilization Acquiring the Best Performance of Appliances in a Distributed Network.

### SCSE 2020

- Impact of metacognition and age group on contemporary video game interface and gameplay design.

### IJCIT journal 2014

- Customer Churn Prediction: A Cognitive Approach.



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