

Mrinal Aich

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A passionate professional with 8.5 years of experience as Software Engineer expertise in building and designing large-scale Backend Systems from scratch. Pursued Masters degree from Indian Institute of Technology(IIT), Hyderabad in Computer Science Engineering.

PROFESSIONAL EXPERIENCE

Senior Software Engineer, ShopeePay

Shopee/Seamoney, Singapore (Garena Online Pvt. Ltd.)

Singapore

Feb 2020 - till date

ShopeePay: Promotion Service

- Developed promotional rewards like Cashback, Coinback, Discount or any reward given to the user by the ShopeePay wallet.
- Collaborated in Design and Development for the ShopeePay - Promotion system.
- Lead the DB Sharding which improved the overall system performance.
- Developed the Campaign settings, Reward Calculation Engine and Quota Center and the core modules critical to the system.
- Lead features like Merchant Payments, User Whitelisting and External Transfer Send & Receive flows.
- Leading a team size of 4+ members depending on the project and feature.

Payment: Outbound / Payout team

- Developed microservices to support the payout flow like Settlement, Reconciliation and Safeguard systems.
- Responsible for making user's cash flow smoothly.
- Integrated with Bank and Cross-Border payout Channels such as UOB, LianLian, Payoneer, PingPong.
- Developed features for Shopee - Bank Account system and Reconciliation system.

Applications Engineer

Oracle India Pvt. Ltd.

Hyderabad, India

June 2018 - October 2019

- Worked in Inventory Management division of Supply Chain Management using Oracle's Application Development Framework (ADF).
- Worked on Customer bugs that were encountered on the Inventory Management UI, Cycle Counting and Physical Inventory.
- Worked on Oracle features like File Based Data Import(FBDI), REST, Business Intelligence Publisher(BIP) related to the project.

LTE Protocol Stack Developer

Digital Dynamic Technology Pvt. Ltd. (R&D of Polaris Networks)

Kolkata, India

July 2013 - October 2015

LTE EPC Emulator: Emulation Software for Core Network Elements of 4G Network.

- Developed multiple Protocol Stacks such as M3AP, LCSAP, SLg as per 3GPP LTE Specifications
- Implemented key features across multiple protocols such as S1AP, Diameter, NAS of LTE MME.
- Delivered features like Trace, Location Services, Diameter Path Failure as per 3GPP LTE Specifications.
- Developed Regression Test Scripts to verify functional aspects using Tcl.
- Delivered Automation scripts for the generation of Programmers guide using Tcl which added value to the build process.

SKILLS

Programming Languages: Golang, Python

Technologies: Microservices, MySQL, Kafka, gRPC, REST, Jenkins, Kubernetes, Docker, GitLab, Elastic Search, Prometheus, Grafana, Jira

Systems: Payment, Wallet, Promotion Services

Previous Experience: Protocol Buffers, Rundeck, Django, Oracle ADF, SVN, C++, C

ACADEMIC PROJECTS

Bottleneck Detection and Removal in Edge-Fog-Cloud Interplay using SDN and NFV

IIT Hyderabad, India

Master's Thesis & Publication

July 2017- June 2018

- Edge-Fog-Cloud computing involves challenging tasks like management of resource availability, compliance with Service Level Agreements (SLAs), dynamic re-configuration of services and networks across different computing domains.
- Delivered a tractable VNF placement algorithm, and a bottleneck detection and removal algorithm for the heterogeneous computing and network environments representing the Edge-Fog-Cloud interplay.
- Developed monitoring of Virtual Network Functions(VNFs) and Network resources.
- Developed detection and handling of possible bottlenecks in the layered network architecture resulting in improving both user experience and utilization of network resources.
- Implemented proof of concept (PoC) using Docker-based NFV and SDN setups.
- Technologies used are NFV, SDN, Ryu SDN Controller, Edge-Fog-Cloud Computing, Docker Containers.

Information Extraction from Micro-blog Posted during Disaster

IIT Hyderabad, India

Course Project, Information Retrieval

July 2016 - Dec 2016

- Micro-blogging sites provide a wealth of resources during disaster events in the form of short texts. Correct classification of these text data into various actionable classes can be used to rescue people in disaster-affected places.
- Delivered a system to classify tweets into given set of topics that were posted during the Nepal earthquake.
- Implemented the classifications into sub-sets through SVM using semi-supervised learning.
- Developed an automated system to Web Crawl Micro-blogging site Twitter using Python.

AWARDS & ACHIEVEMENTS

- Awarded top performance rating for the year 2020-21.
- Awarded *Star Performer Award* by Dynamic Digital Technology for 2013-2014.
- Awarded Merit Scholarship in 2010 by Bengal Engineering and Science University, Shibpur.
- Sponsorship Coordinator of INSTRUO (Techno-Management Fest of BESU, Shibpur).

EDUCATION

Indian Institute of Technology

Hyderabad, India

Master of Technology in Computer Science and Engineering; CGPA: 8.68/10

July 2016 - June 2018

Thesis: Bottleneck Detection and Removal in Edge-Fog-Cloud Interplay using SDN and NFV

Publication: Dynamic Network Function (DNF): Service Chain Placement and Bottleneck Removal for Edge-Fog-Cloud Interplay

Relevant Coursework: Advanced Data Structures and Algorithms, Computer and Network Security, Networked Wireless Systems, Advanced Computer Networks, Distributed Computing, Topics in Network, Information Retrieval

Bengal Engineering and Science University

Howrah, India

Bachelor of Engineering in Information Technology; Percentage: 81.33%

June 2009 - May 2013