

# Sandhya Chandramohan

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## EDUCATION

**UNIVERSITY OF CALIFORNIA, IRVINE**  
**MASTER OF COMPUTER SCIENCE**  
Expected Dec 2019 | Irvine, CA  
GPA: 3.33/4.00

**INDIAN INSTITUTE OF TECHNOLOGY, MADRAS**  
**BACHELOR OF TECHNOLOGY**  
Grad. July 2014 | Chennai, India  
C.GPA: 8.07/10

## HACKATHONS

**BLOCKCHAIN INDIA WEEK HACKATHON** | May 2017  
**RUNNER-UP**  
Placed 2<sup>nd</sup>/15 Teams

## LINKS

Github:// [s4ndhyac](#)  
LinkedIn:// [sandhyachandramohan](#)  
Twitter:// [@s4ndhya](#)

## COURSEWORK

### GRADUATE

Algorithms  
Data Structures  
Data Management  
Computer Security  
Artificial Intelligence  
Neural Networks and Deep Learning

## SKILLS

### LANGUAGES

Over 5000 lines:  
Java • Python • C# • SQL • Solidity  
Over 1000 lines:  
C++ • C • JavaScript • HTML • CSS

### FRAMEWORKS/ LIBRARIES

Extensive  
Dropwizard • .NET • Web2Py  
Comfortable  
React.js • Bootstrap

### OTHER TOOLS/ SERVICES

Extensive  
JIRA • Git • Slack • AWS • IIS Server  
Comfortable  
Jenkins • Redis • Azure • Bash

## EXPERIENCE

### SENIOR MEMBER OF TECHNICAL STAFF | CAPITAL FLOAT

May 2017 – Aug 2018 | Mumbai, India

- Developed Amazon Pay EMI (India), for instant loans at Checkout on Amazon.com by Capital Float, used by millions of people in India daily
- Pioneered the Publish-Subscribe Messaging pattern to scale the system 10x
- Implemented Distributed Locking using Redis to handle 100% of all race conditions in a multi-user web application

### MEMBER OF TECHNICAL STAFF | CAPITAL FLOAT

May 2016 – May 2017 | Mumbai, India

- Engineered a thread-safe implementation, synchronizing critical operations with Mutex objects to enable 100% real-time processing of all payments via APIs
- Increased productivity by 3x and reduced Operations Expenditure by 55%, automating workflows through a network of Crons and Schedulers
- Improved database performance by 30% and ensured 99.99% database availability by setting up MySQL Master-Slave Replication

### SOFTWARE DEVELOPER | CAPITAL FLOAT

May 2015 – May 2016 | Mumbai, India

- Redesigned a Windows Desktop WPF application in the Singleton pattern to a multi-tier architecture RESTful Web Application following the MVC pattern
- Spearheaded the Unit of Work development pattern to carry out operations comprising a business process as one atomic transaction
- Ensured fast development cycles and codebase robustness by integrating the NUnit and Moq libraries for Unit Testing and Mocking

## PROJECTS

### RDBMS | A RELATIONAL DATABASE MANAGEMENT SYSTEM

Sept 2018 – Nov 2018

- Designed and developed a complete Relational Database Management System with optimized storage, index and query systems
- Built an Indexing Component via a B+ Tree supporting range predicates, managing persistent indexes over unordered data

### MINESWEEPER-BOT | AN AI AGENT TO PLAY THE MINESWEEPER GAME

Oct 2018 – Dec 2018

- Modelled an AI agent based on solving Constraint Satisfaction Problems
- Solved 60% of Beginner worlds (8X8 10 Mines), 50% of Intermediate (16X16 40 Mines), 10% of Expert (16X30 99 Mines)

### ROJI | A DECENTRALIZED FINANCIAL INCLUSION PLATFORM

Apr 2017 – May 2017

- Led the development of a platform for the 600 million strong informal work economy in India, through smart contracts in Solidity
- Built for scalability by using the Mapped Struct with Index design pattern to enable O(n) lookup of each object

## AWARDS

2016	1 <sup>st</sup> /10 Teams	Capital Float Tech-Olympics
2016	1 <sup>st</sup> /50	Founder's Institute Ecosystem Scholarship
2015	Top 1% of 1 million	Indian Civil Services Preliminary Examination