

SANDHYA CHANDRAMOHAN

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EDUCATION

UNIVERSITY OF CALIFORNIA, IRVINE	Master of Computer Science	CGPA: N/A	Expected: Dec 2019
INDIAN INSTITUTE OF TECHNOLOGY	B.Tech in Biotechnology	CGPA: 8.07/10.00	Graduated: July 2014

EXPERIENCE

SENIOR MEMBER OF TECHNICAL STAFF, Capital Float May 2017 - Aug 2018

- Developed *Amazon Pay EMI (India)*, for instant loans at Checkout on Amazon.com by Capital Float, used by millions daily
- Pioneered the Publish-Subscribe Messaging Pattern to scale the system, enabling it to support 10 times the existing users
- Implemented Distributed Locking using Redis to handle 100% of all race conditions in a multi-user web application
- Reduced deployment downtime by 100% adopting the Blue-Green deployment strategy, hosting on IIS Server
- Integrated a Payment Gateway with the Loan Management System (LMS), resulting in a 50% increase in repayments

MEMBER OF TECHNICAL STAFF, Capital Float May 2016 - May 2017

- Engineered a thread-safe implementation, synchronizing critical operations with Mutex objects to enable 100% real-time processing of all money transactions via API
- Increased productivity by 3x and reduced Operations Expenditure by 55%, automating workflows with Crons & Schedulers
- Improved database performance by 30% and ensured 99.99% availability by setting up MySQL Master-Slave Replication
- Secured sensitive JSON-RPC APIs with a combination of Symmetric AES and Asymmetric RSA Encryption algorithms

SOFTWARE DEVELOPER, Capital Float May 2015 - May 2016

- Redesigned a legacy Windows Desktop WPF application in the Singleton pattern to a multi-tier architecture RESTful Web Application following the MVC pattern using ASP.NET Web Api 2 and the WCF Framework
- Spearheaded the Unit of Work development pattern to carry out one business operation as one atomic transaction
- Ensured fast AGILE development cycles and codebase robustness by integrating NUnit and Moq Libraries for Unit Testing
- Led the integration of an ORM - PetaPoco to abstract away database specific SQL and protect against SQL Injection

PROJECTS

BOUNTYDAPP • Decentralized Application For Bounty Programs • [Repository](#) • [Application](#) Aug 2018 - Sep 2018

Architected and developed a DApp on the Ethereum Blockchain, writing smart contracts between the bounty creator and hunter

- Adopted the Checks-Effects-Interactions Pattern and the Circuit Breaker Pattern to mitigate against known attacks
- Wrote comprehensive unit tests in Mocha and Chai JS to ensure 100% test case code coverage

ROJI • Decentralized Financial Inclusion Platform • [Repository](#) 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 between the Employer and the Employee

- Built for scalability by using the Mapped Struct with Index design pattern to enable O(n) lookup of each object
- Implemented a Multi-Sig Escrow mechanism, holding the salary credited in Ether at an escrow contract address
- Enabled Weekly/Daily/Hourly Micropayments to the Employee in Wei

FIN-MICRODATA-BOT • Personal Finance Twitter Bot • [Repository](#) • [Application](#) Sep 2016 - Oct 2016

- Created an intelligent Markov chain chat-bot that tweets an individualized narrative of a person once every hour using Survey Microdata imported into Google BigQuery and effects human-like interactions

RESEARCH

Structural Biology & Bio-computing Lab, Supercomputer Education & Research Centre, IISc, Bangalore May 2012 - Jul 2012

- Devised a pattern-matching algorithm in C++ using Enhanced Suffix Arrays to determine CRISPR (Clustered Regularly Interspersed Short Palindromic Repeats) in genome sequences

CERTIFICATION

CONSENSYS ACADEMY	Blockchain Developer	Grade: 93/100	Graduated: Sep 2018
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HACKATHONS

BLOCKCHAIN INDIA WEEK HACKATHON	Runner-Up	2nd/15 teams	Apr 2017 - May 2017
FINTEGRATE ZONE HACKATHON	Runner-Up	2nd/10 teams	Feb 2017 - Mar 2017

AWARDS

- Won the Capital Float Tech-Olympics, as a Core developer helping the team place 1st out of 10 teams **2016**
- Awarded the Founder's Institute Ecosystem Scholarship for entrepreneurial potential competing against 50 fellows **2016**

SKILLS

- **Languages: (Over 5000 lines)** C#, Python, Solidity, SQL, LINQ | **(Over 1000 lines)** C++, C, JavaScript, Java, HTML, CSS
- **Framework/ Libraries: (Extensive)** .NET, WCF, ASP .NET Web API 2, Web2Py | **(Comfortable)** Bootstrap, React.js Web3.js
- **Other Tools/ Technologies: (Extensive)** Git, AWS, Azure, IIS Server | **(Comfortable)** Webpack, npm