

# Rihan Pereira

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## EDUCATION

California State University - Channel Islands	MS in Computer Science	GPA:3.70/4.00	Jan 2018 - Dec 2019
St.Francis Institute, Mumbai University	BS in Information Technology	GPA:2.77/4.00	June 2010 - July 2014

## EXPERIENCE

**IT INFRASTRUCTURE STUDENT ASSISTANT, California State University - CI, Camarillo, CA** Aug 2019 - Dec 2019

- Took initiative to automate operations on zoho inventory of university IT hardware using zoho REST API and python.
- Formulated plan to use blue-green deployment technique to reduce server downtime and handle upgrades.
- Incharged of administrator duties such as imaging new hardware, encrypting volumes, install/configure network printers.

**MEMBER OF CORE TECHNICAL TEAM, Bitstreet Technologies, Mumbai, India** Jan 2017 - Jan 2018

- Awarded and recognized as a top performer, best performing team, meeting expectations plus performance.
- Planned and executed account reconciliation using standalone Node.js script, developed features for on-chain/off-chain transactions by integrating third party payment gateways.
- Built a time-series data archiving program operating on multiple MongoDB collections and exposed stateless pagination API.
- Deployed multi-az MongoDB replica set on AWS EC2 instances as a failover strategy, ensured 99.99% availability.

**SOFTWARE DEVELOPER, Bitstreet Technologies, Mumbai, India** Jan 2016 - Dec 2017

- Lead efforts to incorporate git-flow model improving developer productivity and ease of code deployment by 25%.
- Implemented salt & hashing and Multi-factor Authentication(2FA) with backup and recovery options to secure user accounts.
- Minimized friction during API integration with mobile/web clients by a factor of 2, transforming existing REST APIs to level 3.
- Added functionality to perform HMAC signing and Nonce between internal non-SSL HTTP services which provided integrity.

**SOFTWARE DEVELOPMENT ENGINEER I, Aasaanjobs, Mumbai, India** Dec 2014 – July 2015

- Worked on end-to-end module that allows booking interview time slots using angularJS and Python/Django REST API.
- Dropped manual testing efforts to 30% by automating acceptance tests with phantomJS and Selenium.
- Refactored UI to be responsive to different viewports using Bootstrap, resulting in 15% increase in users retention.
- Wrote embedded js scripts to traverse heavy excel sheet data to fanout notifications.

## PROJECTS

**Whirlpool: six component microservice style scalable continuous topical web crawler** Jun 2019 - Oct 2019

- RabbitMQ serves as a central message bus, formulated implementation in Java, Python, and Node.js. Used Min. priority queue using binary heap to limit rate of crawling, brute force implementation of shingles using minhash, simhash to circumvent deduplication and devised Locality Sensitive Hashing(LSH) to address it at scale.
- Deployed on multi-AZ environment using AWS cloudformation yaml script, authored custom IAM policies and roles.

**Advanced Image Analysis & Techniques** Aug 2018 - Dec 2018

- Applied several techniques to array of images - histograms, image enhancements/restoration, morphology operations, segmentation methods and feature extraction(counting)

**Cybersecurity • CI Security Lab** Sept 2018 - Dec 2018

- Implemented CBC mode to systematically encrypt/decrypt a large plaintext file using 16 rounds of 64-bit DES, SQL Injection attack, case studies on Stuxnet malware, olympic destroyer.
- Gave a talk on securing multi-tier web apps using web cookies vs OAuth vs JWT vs signatures vs Macaroons.

**Accounting & Finance • Financial Analysis between Hieneken vs. Boston Beer Company** June 2018 - Aug 2018

- Composed a report comparing profit margins, ratios, horizontal/vertical and dupont analysis, cash flows of last 5 years.

**Human Computer Interaction • User Experience Lab** April 2018

- Turned a lo-fi wireframe into a prototype featuring interactive GUI dashboard which allows a user to train/load/save handwritten digit classifier based on supervised ML and display metrics of its performance.
- Lo-fi sketch & codework on two-way imperial to metric units conversion tool

**swlogs.me: fully automated static site portfolio composed with git, Travis CI, markdown, vim** Jan 2018 - present

## SKILLS

- **Languages: (Over 5000 lines)** Java, Node.js, Python, SQL, Bash | **(Over 1000 lines)** YAML
- **Frameworks/Libraries:(Extensive)** Express.js, Mongoose, Flask, Sequelize | **(Comfortable)** Django, SQLAlchemy
- **Tools/Technologies:(Extensive)** AWS, Docker, Git, Memcached, RabbitMQ, MySQL, MongoDB, Cloudformation | **(Comfortable)** GraphQL, Jenkins, Ansible, Kubernetes

## EXTRACURRICULARS

- Feeling music in a quiet space, play/record guitar, archiving/remastering records.