

# SOURANIL SEN

1755 O'Farrell St, San Francisco

(631) 452-6565

[soesen@cs.stonybrook.edu](mailto:soesen@cs.stonybrook.edu)

## Summary

---

A full-stack engineer with 4-year prior experience in Java, Ruby, JavaScript and a Machine Learning & Computer Vision enthusiast.

## Education

---

### Stony Brook University

New York

Masters of Computer Science, GPA - 3.78

Jan '17 – May '18

Selected Coursework: Analysis of Algorithms, Machine Learning, Computer Vision, Fundamentals of Computer Networks, Human Factors in Computation, Visualization, Network Security, Theory of Database Systems;

## Research Experience

---

### Graduate Student Researcher | Human Interaction Lab

Fall '17-Spring '18

Using Deep Neural Networks & Computer Vision techniques trying to detect dark patterns in design.

## Research Publications

Spring '17

A Highly Resilient and Scalable Broker Architecture for IoT Applications [[Link](#)]

-- Proceedings of IEEE Conference on Communication Systems & Networks (COMSNET 2018)

## Core Competencies

---

Languages: (Proficient) - Python, Java, Node.js, Ruby on Rails, React.js; (Familiar) – Go, Protobuf, gRPC, Clojure, C++, react-native;

Frameworks & Tools: Docker, Redis, PostgreSQL, MongoDB, TensorFlow, OpenCV, Scikit-Learn, NumPy, PyTorch, Git;

## Relevant Experience

---

### Software Engineer II

Unity Technologies, San Francisco, Aug '18 - Present

- Building micro-services exposing APIs for managing resources for the Unity Platform. (Go, gRPC, Protobuf, Google Pub-Sub)
- Also working with the monetization ML team at Unity (Tensorflow, Python, Go)

### Sr. Software Engineer

Quintype, Bangalore, Mar '16 – Jan '17

- Re-designed core SaaS product from a monolith to micro-services (Clojure, Ruby on Rails, Express.js);
- Built [gems](#) & modules that helped clients integrate with our APIs 55% faster (Ruby, Node.js);
- A real-time stock data streaming service that adds in as a plugin to client websites (RxJS, websockets, Node.js, Redis);

### Software Engineer

ThoughtWorks, Bangalore, Aug '14 – June '15

- Developed core backend services for an enterprise application [RedE](#) & data visualizations (Ruby, PostgreSQL, Redis, D3.js);
- Refactored process transition module to state machines making it easier to maintain and add new changes;
- Migrated & Automated the deployment using AWS OpsWorks thus enabling *One-Click Deployments* in minutes;

### Systems Software Engineer

TCS R&D, Chennai, Sep '12 – Aug '14

- Was working with the R&D team at TCS Innovation Labs, building an enterprise Social Networking platform and sentiment analysis on the data collected. (Ruby on Rails, PostgreSQL, Memcached, Redis, Python)

## Selected Projects

---

### Unsupervised clustering for similar faces for a Research from Northwell Health (Python, Tensorflow, FaceNET, Unity)

CEWIT, Stony Brook University, Spring '18

- Used FaceNET embeddings to detect similar faces and ran supervised clustering to portray in a VR app on an Oculus;

### Multi-tenant Conference REST APIs & iOS-Android React Native app

CEWIT, Stony Brook University, Summer '17

- Designed & implemented a multi-tenant conference app from scratch, including design, models & REST APIs following Swagger 2.0 API Specs and deployed for a client - [NYSTAR](#); Built it's iOS & Android apps (Node.js, PostgreSQL, Sequelize, react-native)
- Followed micro-services architecture for building services like ACLs service, Booking service and events service as REST APIs;

### Human Action classification

Stony Brook University, Spring '18

- As a part of in-class assignment used data collected from Kinect v2 to train a LSTM Network to classify human actions; (Pytorch)
- Used this with a 3D-printed arm band to detect workouts, and integrated with an Alexa Skill. (Winners at Hack@CEWIT)

### Visual Odometry with Deep Convolutional Neural Networks & LSTM

Stony Brook University, Fall '17

- Implemented a DNN inspired by the paper [DeepVO](#), for Monocular Visual Odometry using Deep Learning. (TensorFlow)

### Uberstudies (Side project)

- Designed & built an online real-time one-to-one tutoring platform with a shared coding editor, chat & video for on-demand learning;