

Shrobon Biswas



LinkedIn <https://www.linkedin.com/in/shrobon/>
Address 7 King Street East, ON M5C3C5

Work +1(780)-709-8575

Web <http://www.shrobon.com>

Email shrobon@ualberta.ca Git <https://github.com/shrobon>

Education

University of Alberta (Edmonton, Canada)

Master of Science (M.Sc) in Computing Science | GPA: 4.0

9/2016 - 6/2018

West Bengal University of Technology (Kolkata, India)

Bachelor of Technology (B.Tech) in Computer Science & Engineering | GPA: 8.82

8/2012 - 7/2016

Certifications

AWS - Solutions Architect (Transcript), Nov 2018

Microsoft - Certified Professional (License: E873-5473), July 2014



Technical Skills

- ▶ Java: Spring (MVC, Boot, Data-Rest), Camel, JMS, Mockito, YourKit, VisualVM
- ▶ AWS: S3, DynamoDB, SQS, SNS, RDS, Lambda, ElastiCache(Redis), EKS
- ▶ Web: ActiveMQ, Redis, NodeJS, Flask, AJAX, JQuery, JavaScript
- ▶ DevOps: Docker, Kubernetes, Terraform, Jenkins
- ▶ Big Data: Hadoop, Hive, Kafka, SPARK, MongoDB, MySQL
- ▶ Python: Pandas, Matplotlib, OpenCV, Numpy, Scikit-Learn, Seaborn, Scrapy

Authored online courses

Hands on Computer Vision with OpenCV & Python

- ▶ 883 active students (as of 2/02/2019) | Website: <https://goo.gl/Yz5sQd>

Publications

IoT-MQTT based Energy Efficient Economic Home Automation System

(first author) 3rd International Conference on Microelectronics, Circuits and Systems, Micro2016.

Projects

XYZurl.me : Google Chrome Extension: <https://goo.gl/F2uGa5> | Web App: <https://goo.gl/a5EEdb>

- ▶ Skills: NodeJS, Redis, MongoDB, Facebook login API, Javascript, Heroku, Git
- ▶ nodeJS web-app to help shorten URL's. Implemented urlTracking using geographic and demographic information

Talkativ: A lightweight chatroom app built using NodeJS, Redis, MongoDB, NGINX and Facebook login API

- ▶ Web: <https://goo.gl/oJ2xoM>

Tweenalyzer: Twitter data analysis WebApp deployed on Heroku Cloud using Flask Framework(Python), pandas, and google charts

- ▶ Web App: <https://goo.gl/nYc8PB>

Dev-Support: A marketplace for developers to showcase & sell their projects | Skills: Python, Github API, Stripe API, Materialize

- ▶ Presented at hackathon [HackEd 2017](#), Preview: <https://goo.gl/aEqTEr>

Safari Rush AI: An AI to solve any puzzle configuration for the game of Safari Rush Hour | Documentation / Code: <https://goo.gl/1UoHdY>

- ▶ Uses SMA*algorithm, blocking vehicle heuristic | Decreased search time by 30% by using efficient data structures.

Ataxx AI: An AI opponent that plays optimal moves in limited time to win the game of Ataxx

- ▶ Uses Alpha-beta pruning with iterative deepening | Hashtables are used for memoization | Documentation: <https://goo.gl/eWtGGP>

Traditional Chinese Medicine Image Classification

- ▶ 98% Classification Accuracy was achieved | Project Website: <https://goo.gl/Nmz8HG>
- ▶ K-Means clustering algorithm was used to accurately differentiate between the foreground(Herb), from the background.
- ▶ A python script was written to automate extracting and labelling the target herbs from the given images using segmentation.
- ▶ The segmented images were trained using a Random Forest Classifier.

Improving image classification accuracy of Kaggle Cat vs Dogs dataset using Deep-Learning

- ▶ Increased classification accuracy to 91.18% | Skills: Keras(Theano), Python, OpenCV | Project Video : <https://goo.gl/8iewQK>
- ▶ Performed just-in-time Image Augmentation to tackle overfitting on the reduced Cats Vs Dogs dataset.
- ▶ Utilized Random Search algorithm as a base for effective hyperparameter tuning.

Improving image classification accuracy of Kaggle Cat vs Dogs dataset using Deep-Learning

- ▶ Increased classification accuracy to 91.18% | Skills: Keras(Theano), Python, OpenCV | Project Video : <https://goo.gl/8iewQK>
- ▶ Performed just-in-time Image Augmentation to tackle overfitting on the reduced Cats Vs Dogs dataset.
- ▶ Utilized Random Search algorithm as a base for effective hyperparameter tuning.

Work Experience

7/2018 - Present

Veeva Systems Inc. (Toronto, Canada)

Team: Vault-Renditions API & Infrastructure

Role : **Software Development Engineer**



- ▶ Implemented a scalable PDF merging service
- ▶ Implemented Async Queue based architecture in AWS EKS Kubernetes Cluster for Video-Rendering service.
- ▶ Performance engineering & creating continuous deployment pipelines for 3 renditions services.
- ▶ API development for core-renditions team (merge-fields & PDF e-signatures)

Skills: Java (Spring Boot), AWS (S3, EKS), JMS, PDFBox, ActiveMQ, Camel, Helm, Kubernetes, Docker, YourKit, VisualVM

6/2017 - 2/2018

Amazon.com (Vancouver, Canada)

Team: Corporate Gift Cards

Role : **Software Development Engineer**



- ▶ Engineered a scalable & timezone-adaptive scheduling mechanism for customized notifications for customers in Europe, Japan, China, USA and Canada.

- ▶ Added 5 API's providing numerous reporting capabilities for *Amazon Gift Cards on Demand* customers.

Skills: Java (Spring MVC), AWS (SQS, DynamoDB, SNS), PowerMock, Git, Javascript, CI / CD pipelines

6/2015 - 8/2015

Attify Mobile Security Pvt.Ltd (Bangalore, India)

Role : **Software Engineering Intern**

- ▶ API development for AppWatch in Java and Javascript.
- ▶ Implementing a web layer to control HackRF remotely.