

# Shrobon Biswas



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## Education

9/2016 - 6/2018

University of Alberta (Edmonton, Canada)

M.Sc in Computing Science | Specialization in Multimedia | GPA: 4.0

8/2012 - 7/2016

West Bengal University of Technology (Kolkata, India)

Bachelor of Technology in Computer Science & Engineering | GPA: 8.82

## Certifications

AWS - Solutions Architect Associate (Transcript), Nov 2018

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



## Technical Skills

- ▶ Java: Spring (MVC, Boot, Data-Rest), Mockito, Powermock
- ▶ AWS: DynamoDB, SQS, SNS, RDS, Lambda, S3, Elasticache(Redis)
- ▶ Python: OpenCV, Pandas, Scikit-Learn, Seaborn, Matplotlib, Scrapy
- ▶ Web: NodeJS, Flask, Redis, AJAX, JQuery, D3.js, JavaScript, HTML, CSS
- ▶ Big Data: Hadoop, Hive, Kafka, SPARK, MongoDB, MySQL
- ▶ DevOps: Kubernetes, Terraform, Docker, Git, Jenkins, NGINX

## Authored online courses

Hands on Computer Vision with OpenCV & Python

- ▶ 833 active students (as of 17/5/2018) | 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.

## Work Experience

7/2018 - Present

Veeva Systems Inc. (Toronto, Canada)

Team: Vault-Renditions API & Infrastructure

Role: **Software Development Engineer**

- ▶ Feature/API development for core-renditions team
  - ▶ Responsible for anything Infrastructure / AWS
  - ▶ Complete ownership of merge-fields feature
  - ▶ Created a PDF merge service from scratch with Spring Boot & PDFBox with integrates with our Vault Service.
- Skills: Java ( Spring Boot ), AWS (S3, SQS, Lambda, EC2, SQS, Step Functions), ActiveMQ, Mockito, Terraform, Packer, Ansible, Docker, Git, Javascript, JIRA, Jenkins, Camel



6/2017 - 2/2018

Amazon.com (Vancouver, Canada)

Team: Corporate Gift Cards

Role: **Software Development Engineer**

- ▶ Engineered a scalable & timezone-adaptive scheduling mechanism for customised notifications.
  - ▶ Added 5 API's providing different reporting capabilities for *Amazon Gift Cards on Demand* customers.
  - ▶ Implemented automatic periodic email delivery of transaction reports for customer in Europe, Japan, China, USA and Canada.
- Skills: Java ( Spring ), AWS (SQS, DynamoDB, SNS), PowerMock, Git, Javascript, Continuous Deployment



6/2015 - 8/2015

Attify Mobile Security Pvt.Ltd (Bangalore, India)

Role: **Software Engineering Intern**

Skills: python, javascript, docker, git, Arduino



## Projects

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

Description : A nodeJs web-app to help shorten URL's, with additional features of url tracking and incoming traffic analytics.

- ▶ Skills: NodeJs, Redis, MongoDB, Facebook login API, Javascript, Heroku, Git

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>

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>

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.

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