Shantanu **Deshmukh**

RESEARCH ASSISTANT · GRADUATE STUDENT · SAN JOSE STATE UNIVERSITY · 754 THE ALAMEDA, SAN JOSE, CA - 95126

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Skills

Java, Python, Tensorflow, Flask, MongoDB, Node js, Express js, Angular, D3.js, Android Development, JSP, JavaScript, PHP, jQuery, MySQL, LAMP, Spring Framework, Web Development, HTML, CSS, Linux

Work Experience

AcuityAI Stanford Startup
Palo Alto, CA

COMPUTER VISION AND MACHINE LEARNING INTERN
June 2018 - PRESENT

- Improved image detection accuracy by hyper-parameter optimization on different models like ResNet, VGG, MobileNet, Inception, etc. and modifying existing layers/models as per the use case;
- Extracted, transformed and cleaned large dataset on Linux based cloud machines to train AI models;
- Did supervised learning with feature extraction and principal component analysis for feature reduction;

San Jose State University
San Jose, CA

RESEARCH ASSISTANT
Jan. 2018 - PRESENT

- Classified Inhibitors of Hepatic Drug Transporters using Machine Learning;
- Converted unstructured data to a structured format using Natural Language Processing and exposed it using MEAN Stack on Google Cloud
- Awarded funds by the SJSU College of Science Research, Scholarship, and Creative Activity (RSCA) grant;

Deloitte Consulting LLP
Mumbai, India

BUSINESS TECHNOLOGY ANALYST (DELOITTE DIGITAL)
Nov. 2015 – Aug. 2017

- Evaluated as a top performer for implementing multiple business modules in Java, overcoming obstacles, and ensuring timely delivery working under an agile development model;
- Helped in architectural design of large-scale projects considering trade offs and effectively communicating across the team and the client;
- Created a distributed data processing engine using Apache Storm and Apache Kafka, as a Firm initiative to be proposed to a prospective client;

Accenture Services Pvt. Ltd
Hyderabad, India

SOFTWARE ENGINEER
Aug. 2013 – Oct. 2015

- Designed and developed multiple use cases in Java along with their jUnits satisfying user requirements ;
- Created a XML based automated testing framework, to test REST services, saving around 40% of the previous testing effort;
- Awarded ACE(Accenture Celebrates Excellence) award for effective team-work and successfully delivering a high risk project;

City Synapse Info Pvt. Ltd. (Internship)
Bangalore, India

WEB DEVELOPER INTERN
Jan. 2012 - July. 2012

- Maintained the website realtykart.com; adding/editing webpages using full stack(LAMP), managing domains and hosting;
- Used google apps, AdWords, Designed and edited digital banners/images using Photoshop, gimp, etc.;

Publications

Machine Learning for Classification of Inhibitors of Hepatic Drug Transporters
In Press

IEEE 17TH INTERNATIONAL CONFERENCE ON MACHINE LEARNING AND APPLICATIONS (ICMLA 2018)
Orlando, FL

PediatricDB: Data Analytics Platform for Pediatric Healthcare
In Press

IEEE 13TH INTERNATIONAL CONFERENCE ON DIGITAL INFORMATION MANAGEMENT (ICDIM 2018)
Berlin, Germany

Academic Projects

Obstacle Detection to help Visually Impaired (GuideApp - Android Application)
San Jose, CA

ANDROID SDK, TENSORFLOW LITE, PYTHON
Dec. 2017

- Created an application to alert visually impaired by detecting obstacles on the street;
- Trained MobileNet model with self curated images to get an accuracy of 93%;

Automated Solar Panel installation layout generation using Object + Edge detection
San Jose, CA

TENSORFLOW (MOBILENET), PYTHON, EDGE DETECTION ALGORITHM
Feb. 2018

- Detected obstacles on roof, followed by edge detection on each of the detected bounding boxes, to get the obstacle boundaries;
- Compared and contrasted results from different algorithms;

Distributed Patient Information System Web API
San Jose, CA

Java, Active MQ, Cassandra DB, Hazelcast Caching, Spring Boot
Oct. 2017
- Built a REST-ful Web API using a distributed system architecture hosted on multiple AWS instances(PaaS);

Visualization using Data Sonification and NLP for e-book comprehension using NLTK
San Jose, CA

Python, NLTK, Jython, Genetic Algorithm, Bootstrap
Sept. 2017
- Used Jython music to sonify changes in California's temperature over last 80 years;
- POS tagged web scrapped e-books, extracted and visualized relationships between entities(characters and locations);
- Used genetic algorithm to auto-create a bootstrap based website using characters, locations and events from the book;

Image Classification, Clustering and Mutation
San Jose, CA

Python, K-Means Clustering, Hierarchal Clustering, Genetic Algorithm
Sept. 2017
- Classified and Clustered images using k-NN, K-Means and single link hierarchal clustering algorithm;
- Performed three fold cross-validation, analyzed and plotted accuracy vs K graph;
- Used genetic algorithm to mutate a source image into a destination image;

Data Visualization Web Apps
San Jose, CA

Mongo DB, Express js, Angular js, Node js, D3.js
Nov. 2017
- Visualized around 5GB of publicly available Obama government's social media data including images, videos and audios on a chronological time-line based interface;
- Visualized California's college's admission data as a force directed graphs, for all academic year's from the year 2003 to 2016;

Proximity Notifier - An Android Application and a Web portal
Mumbai, IN

Android SDK, Linux, Tomcat, PHP, MySQL
Nov. 2012 – April 2013
- Created an Android Application and a web portal for proximity based notifications;
- Built using LAMP Stack and Google's Geolocation API;

Extracurricular Activity

Entrepreneurship Cell Website
Mumbai, India

Linux, Apache Tomcat, MySQL, PHP
March. 2012
- Worked as a Web Manager of Entrepreneurship Cell, an association managed by students to promote entrepreneurial thinking.
- Created their web portal and developed an on-line treasure hunt for their annual event using LAMP stack.

YouTube Channel tutoring Android Application Development
Mumbai, India

Co-Author
Mar. 2012
- Started a you-tube channel tutoring android application development, it has around 18k views.

Education

San Jose State University
San Jose, CA

M.S. in Computer Science **(GPA 4.0)**
Aug. 2017 - Exp. May. 2019

KJ Somaiya Institute of Engineering and Information Technology
Mumbai, India

B.E. in Computer Engineering
July. 2009 - May. 2013

Committees

2012	**Web Manager**, Entrepreneurship Cell	*Mumbai, India*
2011	**Event Organizer**, Computer Society of India	*Mumbai, India*

Awards

2018	**Outstanding Academic Achievement Scholarship**, San Jose State University	*San Jose, CA*
2017	**SAP Certified Development Professional**, SAP Hybris Commerce 6.0	*Mumbai, India*
2016	**Applause Award**, For Diligent work and Resourcefulness	*Mumbai, India*
2014	**ACE Award**, For effective communication and fabulous team work to successfully delivery a high risk project	*Hyderabad, India*