

# Shantanu Deshmukh

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## Skills

*Languages:* Python, Java, Haskell

*Database:* MySQL, MongoDB, DynamoDB

*Cloud:* Amazon AWS, Google GCP

*Machine Learning:* TensorFlow, Keras, scikit-learn, numpy, pandas, nltk

*Web:* JavaScript, Angular, Bootstrap, Materialize, jQuery, d3.js, css, node.js, MEAN

*Tools & IDEs:* Android SDK, GitHub, Eclipse, Jenkins, JIRA, Unix/Linux env

## Research Papers

### Fine Object Detection in Automated Solar Panel Layout Generation

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

Orlando, FL

In Press

### Machine Learning for Classification of Inhibitors of Hepatic Drug Transporters

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

Orlando, FL

In Press

### PediatricDB: Data Analytics Platform for Pediatric Healthcare

IEEE 13TH INTERNATIONAL CONFERENCE ON DIGITAL INFORMATION MANAGEMENT (ICDIM 2018), PP. 216-221

Berlin, Germany

Sept. 24-26, 2018

## Work Experience

### AcutyAI Stanford Startup

COMPUTER VISION AND MACHINE LEARNING INTERN

Palo Alto, CA

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
- Performed supervised learning with feature extraction and principal component analysis for feature reduction

### San Jose State University

RESEARCH ASSISTANT

San Jose, CA

Jan. 2018 - PRESENT

- Used machine learning to classify inhibitors of hepatic drug transporter's SMILES strings
- Applied traditional machine learning techniques(SVM, random forest) and compared the results with deep learning models(RNNs, LSTM)
- Converted unstructured medical text 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

BUSINESS TECHNOLOGY ANALYST (DELOITTE DIGITAL)

Mumbai, India

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
- Awarded SAP Hybris Commerce development professional certificate

### Accenture Services Pvt. Ltd

SOFTWARE ENGINEER

Hyderabad, India

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

## Academic Projects

### Obstacle Detection to help Visually Impaired (GuideApp - Android Application)

TENSORFLOW, PYTHON, ANDROID SDK

San Jose, CA

Dec. 2017

- Created an application to alert visually impaired by detecting obstacles on the street by training a MobileNet model to get an accuracy of 93%

### Text Scraper and Classifier

PYTHON, KNN ALGORITHM, K-MEANS ALGORITHM, TF-IDF

San Jose, CA

Sept. 2017

- Built a scraper to scrap jobs listings followed by tf-idf vectorization and k-NN to find the top matched jobs and grouped them using Lloyd's algorithm

### Image Classification, Clustering and Mutation

PYTHON, K-MEANS CLUSTERING, HIERARCHICAL CLUSTERING, GENETIC ALGORITHM

San Jose, CA

Sept. 2017

- Classified and Clustered images using k-NN, K-Means and single link hierarchical 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

## Education

### San Jose State University

M.S. IN COMPUTER SCIENCE (GPA 4.0)

San Jose, CA

Aug. 2017 - Exp. May. 2019

- Awarded a **Scholarship** for Outstanding Academic Achievements

### KJ Somaiya Institute of Engineering and Information Technology

B.E. IN COMPUTER ENGINEERING

Mumbai, India

July. 2009 - May. 2013