Dwarkanath Prabhu
Software Engineer

Software engineer with a proven knowledge of application development, database management, front-end development and deployment

Contact:

- 🌐 dwarkanath.com
- pdwarkanath
- ✉ dwarkanath.prabhu@gmail.com
- ☏ (979) 709-2312
- 📍 College Station, TX

Technical Skills:

- Python ★★★★ 4.5/5
- SQL ★★★★ 4/5
- HTML ★★★★ 4/5
- CSS ★★★★ 4/5
- JavaScript ★★★ 3.5/5
- C++ ★★★ 3/5
- ASP.NET ★★★ 3.5/5
- PHP ★★★ 3/5
- AWS ★★★ 3/5

Soft Skills:

- Writing ★★★★ 4/5
- Public Speaking ★★★ 3.5/5
- Leadership ★★★ 3.5/5
- Teamwork ★★★★ 4/5

Interests:

- Memes ★★★★★ 5/7
- Standup Comedy
- Digital Marketing
- Linguistics

Work Experience

Software Engineer, Conference Management Services (CMS) Inc.   Oct 2019 - Present

CMS Inc. is an event management company specializing in academic conferences

Virtual Conference Platform

- Built a web application for users to register and upload presentation videos to an Amazon S3 Bucket
- Wrote a Python script to import registration data from external vendor's API
- Developed an application in PHP for on-demand access to paper presentation videos used by over 100,000 users
- Scheduled Zoom Meetings using the Zoom API for live sessions with access granted only to registered and authenticated participants
- Led the execution of 2 virtual conferences from start to finish

Sponsor Registration System

- Created customized sponsor registration systems in ASP with a SQL Server database for 10+ conferences incorporating all client requirements
- Designed a visual booth selection interface using CSS Grid
- Developed a payment system to charge credit cards using Authorize.Net

Paper Management System

- Transitioned 15 year old code to assign reviewers to papers from PHP to Python
- Led the development of IEEE copyright submission API for papers
- Implemented live search for paper title, author name etc. by creating an API endpoint and making AJAX calls to the API
- Automated creation of post-conference proceedings with full-text search of presented papers using a Flask (Python) app served via nginx on Debian

Research Assistant, Texas A&M University   Sep 2017 - Oct 2019

Air Quality Monitoring (Data scraping)

- Scraped historical data of air quality from PurpleAir REST API for pollution monitors using Python (requests)
- Estimated risk to Asthma patients based on PM2.5 data and CDC reports

Skin Cancer Detection Using Deep Learning (Computer Vision)

- Analyzed a labeled dataset of 10,000+ skin images to classify into 7 types of diseases
- Achieved validation set multi-class precision of 87.5% - a 25% improvement over baseline by using ResNet50 (pretrained on ImageNet), Data Augmentation and Weighted Loss to fix class imbalance

Power Generation Capacity Planning – Conference Paper (Optimization)

- Modeled and solved a bi-objective optimization problem using linear programming to minimize water utilization and cost for power generation in Texas with CPLEX in C++ over the next 25 years
- Built an app using Shiny framework for R and GIS data to display optimal solutions on a map

Marketing Data Analyst, Aasaanjobs.com   Jan 2015 – Jan 2016

Aasaanjobs.com (now OLX People) is a job portal for entry-level jobs in India

- Performed attribution analysis using data from Google Analytics, Kochava and SQL
- Measured the effectiveness of marketing spending by running A/B tests on ads on Facebook and Google
- Achieved 20,000 app downloads in three months since launch at an average cost of $1 per install

Strategy & Operations Analyst, Deloitte   Jul 2012 – Dec 2014

Supply Chain Transformation for a leading footwear manufacturer (10-month project)

- Explored sales data to classify SKUs into 3 classes; Forecasted demand and formulated aggregate plans for each class
- Partnered with operations teams to create optimized production schedule and procurement plan
- Improved order fulfillment from 65% to 90% and increased rated production capacity by 20%

Projects

ProductAnimal.com (React App)   Oct 2020 – Nov 2020

- Created a React app to generate a startup name using the formula ProductName + Animal (eg. mailchimp)
- Deployed a Javascript (NodeJS) function as a microservice via API Gateway and AWS Lambda to check if .com domain is available to register for the name

Week In Memes (Static Website)   Feb 2019 – Mar 2020

Week In Memes is a blog that maintains a record of all Indian meme templates as they are generated and used

- Wrote 100+ articles in 1 year using a Python script that scrapes Twitter for memes on trending topics
- Designed a custom theme for Hugo (a Go based static site generator) to publish the blog
- Devised Python scripts for automation of social media posting to Twitter and Pinterest saving time by 80%
- Automated liking posts, commenting and following users on instagram; Increased followers by 300% in a month
- Grew to 10,000+ visitors/month using Search Engine Optimization, Email Marketing and Social Media at no cost

Programming Language Prediction (Natural Language Processing)   Mar 2019 – Apr 2019

- Collected data of almost 20,000 code files by scraping GitHub with its GraphQL API
- Built a data set of files labeled with the language each file is written in
- Trained LSTM model in Keras to predict whether file contains Java or not with 99.8% validation set accuracy

Twitter clone (Web Application)   Jan 2019 – Mar 2019

- Built a web app with Flask back-end, Bootstrap front-end and SQL database for user-generated posts like Twitter
- Implemented ElasticSearch to search for posts and users. Deployed to cloud via Heroku

Education

M. Eng., Industrial Engineering, Texas A&M University		Dec 2018
B.Tech., Mechanical Engineering, Indian Institute of Technology Bombay		Aug 2012