



# Dwarkanath Prabhu

## Software Engineer

### Contact:

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 Toronto, ON  
Authorized to work in Canada indefinitely as a Permanent Resident


### Technical Skills:

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


### Certifications:

- AWS Certified Cloud Practioner
- Full Stack Open - University of Helsinki
- Google IT Support Specialist
- Coursera Deep Learning Specialization

### Soft Skills:

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

### Interests:

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

Software engineer with experience in back-end development, database management, front-end development and consulting

### Work Experience

**Software Engineer, WorkSpan** Mar 2022 - Present

WorkSpan is a SaaS platform for companies to build and manage joint sales partnerships

- **Led a team** of 3 developers to automate product configurations saving 4 hours of employee time per customer
- Implemented OIDC authentication in **Angular** for customers to use their own SSO provider to login to WorkSpan
- Developed a REST API and **deployed to Google Cloud** to translate data from Google Partner Advantage Portal pub/sub topic and share with customers
- Internal **Python Automation Scripts**
  - Identify and delete duplicate objects from DataStore (GCP **NoSQL** database)
  - Make hitherto single person accessible files company wide accessible
  - Daily and weekly error reports from trace logs in BigQuery
- Wrote handoff documents for all the above features for **training junior developers** and customer service teams

**Software Engineer, Conference Management Services (CMS) Inc.** Oct 2019 - Jan 2022

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

**Virtual Conference Platform**

- Led the execution of 2 virtual conferences from start to finish attended by 15,000 attendees each
- **Architected and built** an application for on-demand access to paper presentation videos used by over 100,000 users
- Developed a web application for users to register and upload presentation videos to an AWS S3 Bucket
- Automated Zoom Meetings creation using Zoom API for live sessions with access limited to authorized participants

**Sponsor Registration System**

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

**Paper Management System**

- Refactored 15 year old code to assign reviewers to papers from **PHP to Python**
- **Led the development** of the API for paper authors to submit copyright to IEEE
- Built full-text search for papers by creating an API in PHP and making AJAX calls to it
- Automated creation of post-conference proceedings using a Flask 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 Manager, Aasaanjobs.com** Jan 2015 – Jan 2016

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

- **Hired and managed** a team of 10 including copywriters, designers, editors and digital marketers

**Strategy & Operations Analyst, Deloitte** Jul 2012 – Dec 2014

Deloitte is one of the largest consulting firms in the world.

### 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 **Node.js function to AWS Lambda** as an API 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 (**Golang** 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 12,000+ visitors/month** using Search Engine Optimization, Email Marketing and Social Media at no cost

**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