Dwarkanath Prabhu
Software Engineer

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

Contact:

- 🌐 dwarkanath.com
- 🐙 pdwarkanath
- ✉ dwarkanath.prabhu@gmail.com
- 📞 (979) 285-5215
- 📍 Toronto, ON

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

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

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