DIPKUMAR PATEL

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EDUCATION DETAIL

University of Ontario Institute of Technology(UOIT) **January 2020 - Present**
Masters of Applied Science, Electrical and Computer Engineering

Gujarat Technological University, Ahmedabad, India | 8.28 CGPA **August 2011 - May 2015**
Bachelor of Engineering in Electronics and Communication Engineering

Streebo solutions Pvt Ltd | Ahmedabad, India **July 2018 – present**
Senior technical consultant

- Creating full-stack web applications development in Java, spring, spring boot, angular, reactJs and other supportive technologies for clients across the globe.
- Worked on product development. which can generate web and mobile applications just by dragging and dropping components to the project explorer.

Infosys Limited | Pune, India **July 2015–July 2018**
Senior system engineer

- Created and managed web applications in Java, Spring, spring boot, angular for world's largest soft drink and bottling company
- Developed and trained chatbot and integrated it with existing web and mobile apps and also integrated it in messenger for internal employees.
- Created RPA tool to manage and run automation scripts on 7 different machines. Integrated dashboard to check all the information in one place and to control the entire automation ecosystem. These automation scripts were created to solve routing service requests, batch jobs and to generate reports. It was saving 40 hours of effort a day and I have received recognition and appreciation award for these implementations.

TECHNICAL SKILLS

Languages:	C, C++, Java, Python, Js, Angular, VB script
Databases:	SQL, Oracle SQL
Java Technologies:	Spring, Spring Boot, JDBC, JSP, JSF, Hibernate, servlet
Test cases:	Junit, Mockito, PowerMockito
Code Analysis:	Bamboo, SonarQube
Version control:	Git, Bitbucket
Machine learning and AI:	Tensorflow, Keras, sci-kit learn
Computer vision:	open cv
Embedded:	Arduino, raspberry pi, ROS(Robotics operating system)
PCB designing:	Fritzing, National instrument multi sim

COURSES & CERTIFICATION

Certification	University/issuer	Source
Dealing with Missing Data in Python	Datacamp	
Cleaning Data in Python	Datacamp	
Visualizing Time Series Data in Python	Datacamp	
Model Validation in Python	Datacamp	
Manipulating Time Series Data in Python	Datacamp	
Introduction to Deep Learning in Python	Datacamp	
Introduction to Data Visualization in Python	Datacamp	
Feature Engineering for Machine Learning in Python	Datacamp	
Dimensionality Reduction in Python	Datacamp	
Analyzing IoT Data in Python	Datacamp	
ARIMA Models in Python	Datacamp	
6.00.1x: Introduction to computer science and programming	Massachusetts Institute of Technology (MIT, USA)	www.edx.org

language using python		
Introduction to Linux	Linux Foundation	www.edx.org
CS101.1x: Introduction to computer science part-1	IIT, Bombay	www.edx.org
DEV210x: Introduction to C++	Microsoft	www.edx.org
COMP102.1x: Introduction to JAVA Programming	Hong Kong Univ. of Sci. & tech.	www.edx.org
DAT201x: Querying with Transact-SQL	Microsoft	www.edx.org
DEV220x: AngularJS: Framework Fundamentals	Microsoft	www.edx.org
IBM: CB0103EN: How to Build Chatbots	IBM	www.edx.org

ACTIVITIES

- Mozilla Firefox student ambassador and Volunteer at Google Developer Group, Baroda
- Participated in MIT Media Lab, 5th design and innovation workshop and created solutions to enable disabled people. A few hundred were selected from all India out of thousands of entries.
- Winner at state level hackathon hack-pi-duino, organized at Ahmedabad, India.
- Runner up in national level Hackathon Make-A-Thon at IIM, Ahmedabad.
- Selected for Google India challenge scholarship: Web development track in Udacity. This scholarship was started by Google to train developers across India. After selection, I have opted for the web development track.
- Selected for Udacity - self-driving car engineer nano-degree scholarship sponsored by KPIT. out of thousands of applications, few hundred were selected. This interactive course was nicely designed to learn how to make self-driving. Apart from course lectures I have done 5 projects like lane line finding, traffic sign classifier, behavioral cloning, extended Kalman filter.
- I have done a 2 months virtual internship in an adstore internet company. My role was to manage a client's portfolio on different social media sites and to run a social media campaign for them.
- Volunteer in Streebo academy and tech girls initiative to provide tech education to girls and economically backward school students.

PROJECTS:

Stanley Jr. - An autonomous car:

- Stanley Jr. is am autonomous car build for f1tenth racing competition. It can go a maximum of up to 60 mph. The car uses Hector SLAM and pure pursuit Localization and path planning approach. Project files and video presentations available at our GitHub page.

Behavioral cloning of self-driving car

- I have applied deep neural networks and convolutional neural networks to clone driving behavior. I trained, validated and tested a model using Keras. Input to the project was training data containing what to do when certain situations come. Based on that I trained my model and after that, I applied the same to driving simulator where the car was running smoothly and besides steering angle information was displayed.

Advanced lane line finding from live video

- When we drive we use our eyes to decide where to go. In this project, I used python and open cv to take video feed as input And detected lane lines on curvy roads so that cars can predict where to drive itself. Steps performed to get the output: Performed a camera calibration, Applied a distortion correction, color transforms and gradients to create a thresholded binary image, performed perspective transform, detected lane pixels using the histogram, finding the curvature of the road, displayed green color in lane lines in the original video.

Quadcopter: An unmanned autonomous vehicle

- As part of my final year project, I have created quadcopter which can be flown autonomously without the remote control. After selecting path on the map, data (coordinates, path and at what height to fly) was fed in quadcopter controller and than quadcopter was able to finish its ride on its own. One challenge we were facing was during landing time, as we have used GPS there was an error of up to 5 meters. To avoid this we fitted the camera in our quadcopter and using open cv, we processed live video feed and decided where to land and achieved 95% accuracy.

PERSONAL DETAILS:

- **Date of Birth:** 21st September 1994
- **Gender:** Male
- **Nationality:** Indian
- **Hobbies:** Gaming