# Tushar Teji

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### **EDUCATION**

Master, Electrical & Computer EngineeringIllinois Institute of Technology, Chicago, ILMay 2018B.E., Electronics & Comm. EngineeringPanjab University, Chandigarh, IndiaMay 2011

## **TECHNICAL SKILLS**

Python, Perl, C/C++, Bash, MATLAB, SQL, HTML, CSS, Visual Basic, Verilog, and VHDL

Python Tools:

Libraries - TensorFlow, OpenCV, SciPy, NumPy, Pandas, etc.; Web Frameworks - Django, Flask

Functional Testing, Behavior-driven Development, Unittest, Pytest, Robot framework, Selenium

**DevOps Tools:** Jenkins, Git, GitHub, JFrog Artifactory, PagerDuty, Splunk, Chef, Terraform, Docker, New Relic, & AWS **Other Tools:** MySQL, GNU Octave, Visual Studio, and Microsoft Office – Word, Excel, Power Point, and Outlook

**Operating Systems:** Unix, Linux, and Windows

# **WORK EXPERIENCE**

## **US Tech Solutions,** Python Developer

Client: Farmers New World Life Insurance (WA, USA)

February 2020 – Present

- Converted in-house Base, File and Excel utility Perl modules into Python and wrote various unit test cases to support the modules
- Worked on cleaning up the former relational tables and developed automation scripts for storing, fetching, and manipulating tables
- Reviewed and tested various Data Validation Python scripts, remodeled dependent configuration files and system modules
- Rewrote broken Python validation and comparison scripts from scratch utilizing Pandas and NumPy libraries
- Assisted teams next door on their Python projects by participating in their team meetings as the language expert
- Explained coding and designs to different levels of business in technical and non-technical manner

# SystemoneX Inc., Python Developer

July 2018 - January 2020

<u>Clients</u>: Capital One (TX, USA), Charter Communications (CO, USA)

- Designed, developed and maintained web-based applications to enhance the performance & reliability of currently running apps
- Involved in the development of new industry-leading products using the company's open-source based tech stack
- Created various RESTful web services with Django, MySQL, and MongoDB
- Translated and refactored various C/C++ codes into Python scripts based on metrics such as efficiency, throughput, and project
- Rewrote various bash scripts and Perl scripts into Python utilizing various modules to deliver a certain format of data
- Worked on projects involving writing and as well as reading data from CSV and excel file formats using Python
- Created Docker containers utilizing existing Linux containers & AMI's. Created Docker containers from scratch as well
- Worked on Gitlab CI and Jenkins for CI and performed various end-to-end automation for all builds and CD
- Built CI/CD Pipeline using Jenkins to retrieve the code, compile, perform tests, and push the artifacts to JFrog Artifactory
- Worked with AWS CloudFormation Templates for multiple services and centralizing it between the service | Hands-on experience in automating deployment using Cloud Formation Template, Terraform, Chef, Docker
- Worked on other AWS services like EC2, S3, ELB, Auto-scaling, ECS, Route53, VPC, CloudWatch, and Lambda

#### Chamberlain Group (IL, USA), *Intern - Intellectual Property Engineering*

June 2017 – August 2017

- Worked on Landscape Search and White Space Analysis in the field of Garage Door Openers and associated Trainable Transceivers | Developed Patent Map on connectivity and Internet of Things (IoT)
- Utilized World-class tools and resources such as Derwent Innovation, Innography, LexisNexis TotalPatent, etc.
- Interacted with the USPTO Officials, and worked with outside Patent Attorneys on lawful matters related to Patents
- Aligned Patent activities with corporate strategy and needs | Offensive and defensive Patent strategies

# LuminoGuru Pvt. Ltd. (Punjab, India), Python Engineer

November 2014 – August 2016

- Involved in the development of various Python APIs which work both in Linux as well as Windows and maintained them using the Revision Control GIT Repository System
- Wrote queries using SQL for the manipulation of data from the database | Created Database using MySQL
- Wrote various Parsers using Python for the extraction of useful data from Design Database | Performed XML parsing using Python
- Involved in the development and maintenance of AI based ChatBot for upgrading Business quality

• Worked with Python to manipulate data for data loading and extraction utilizing various Python libraries like SciPy, NumPy and pandas for the data analysis | Python frameworks: Django, Flask

### Signicent Information Solutions LLP (Chandigarh, India), <u>Sr. Patent Research Analyst</u> May 2013 – November 2014

- Worked on varied technologies such as CMOS, VoIP, Reusable Launch Vehicles, MicroLEDs, IGBT, Smart Watch, Smart Glass, Airships, Ultrasound, etc. | Handled 70+ projects including but not limited to Patent drafting, Landscapes, Prior-art searches, Novelty searches, Invalidations, Infringements, FTOs, Market researches, Trademark searches, Portfolios, etc.
- Handled big team of patent experts in the Electronics/Electrical Department (as well as other departments such as Mechanical and Biomedical) | Provided trainings to teams | Administered resource allocation | Organized various meetings
- Developed various automation tools using VBA in Excel that helped reduce the task time from hours to seconds | Wrote various Macros and VB programs | Honored with "Out-of-the-Box Thinker" Award for working on such tools

#### **PROJECTS**

#### **Alien Invasion**

- Developed a version of the popular arcade game "Alien Invasion" in which a player controls 2-dimensional ship movement and fires up aliens coming from the top with the intensions of invading the territory.
- Skills: Python, Pygame, Unittest

### **Algorithms Implementation**

- Developed programs to implement algorithms for solving unconstrained optimization problems
- Implemented 4 algorithms: Steepest Descent, Newton, BFGS Quasi-Newton, and Conjugate Gradient
- Skills: Python, SciPy, Matplotlib

## **Digital Logic Simulator**

- Built a digital logic simulator that can simulate non-trivial digital systems including CPUs
- Simulator was designed to Simulate synchronous circuits representing FSM, which were specified in EasyVL (simplified version of Verilog), a language designed specifically for this project
- Skills: C++