

Tushar Teji

Round Lake Beach, Illinois – 60073, USA | +1 (224) 518–6332

dev.tusharteji@gmail.com | <https://linkedin.com/in/tusharteji> | <https://github.com/tusharteji> | <https://tusharteji.com>

EDUCATION

MS, Information Technology	University of the Cumberlands, Williamsburg, KY	December 2022
Master, Electrical & Computer Engineering	Illinois Institute of Technology, Chicago, IL	May 2018
BE, Electronics & Comm. Engineering	Panjab University, Chandigarh, India	May 2011

TECHNICAL SKILLS

Programming:	Python, Perl, C/C++, Bash, MATLAB, SQL, HTML, CSS, Visual Basic, Verilog, and VHDL
Python Tools:	<u>Libraries</u> - TensorFlow, OpenCV, SciPy, NumPy, Pandas, etc.; <u>Web Frameworks</u> - Django, Flask
Testing Tools:	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

Technology Square Inc., Python Developer **May 2022 – Present**

Client: Bank of America (Remote)

- Developed various types of Forex trading calculators using Python and wrote corresponding unit test cases
- Utilized automation & testing applications to perform functional & non-functional requirements on the Quartz (Python) platform
- Participated in gathering requirements, developing codes, investigating automation failures regularly, & reporting status
- Collaborated with test engineers weekly to discuss automated regression setup, available validation tools, and test plans
- Managed codes and test scripts using internal Quartz source control and tracked bugs using JIRA
- Worked in an Agile environment utilizing various agile software development methodologies

TEKSystems Inc., Python Developer **August 2021 – May 2022**

Client: PNC Bank (Remote)

- Engaged in designing test strategies for Recurring Transaction Forecasting Tool (model) that utilized rule-based classifier to predict transactions that have a high probability of being recurring
- Wrote various unittest cases in Python to validate text processing performed by the model on the transaction descriptions ingested from source tables in the Hadoop data lake
- Developed test cases for validating intermediate statistics and feature variables calculations such as median and standard deviation
- Wrote data validation scripts to test the final score calculations such as forecast date, confidence score, consistency score, recurring flag, and forecast variance
- Designed test plans and developed validation scripts for Available Balance model (predicts available balance for next 3 days) and Card Behavioral model (predicts credit scores for credit accounts)
- Performed testing of Pyspark applications using Python's Pandas and Numpy libraries
- Queried huge sets of customer information using Hive and Impala | Wrote and executed various complex SQL queries using spark jobs with Hive integration
- Utilized Application and Test Management tools such as Micro Focus ALM and Atlassian Xray to create and organize test plans, execute manual tests and generate test summary reports

US Tech Solutions, Python Developer **February 2020 – February 2021**

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

- 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

Clients: 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

Signicent (Chandigarh, India), *Sr. Patent Research Analyst****May 2013 – August 2016***

- 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 intentions 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++