



## PERSONAL

Location: Leuven, Belgium

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Website:

[www.saurabhjaiswal.com](http://www.saurabhjaiswal.com)

Tutorials:

<http://www.pythonmates.com>

Blog:

<http://www.blogmates.org>

GitHub:

<https://github.com/saurabh3737>

LinkedIn:

<https://www.linkedin.com/in/saurabh37/>

## EDUCATION

### Master of Technology

DIAT DRDO, Pune, India  
Modelling & Simulations

### Bachelor in Engineering

NIIST RGPV, Bhopal, India  
Computer Science & Engg.

## CERTIFICATION

- Certified ScrumMaster® (CSM)
- AWS Certified Solutions Architect - Associate
- Certified ITIL® Service Management Foundation
- Certified Information Security Expert (CISE) Level-1
- DELF A1 Level, International Certification in **French** language
- CLT A2 Level, International Certification in **Dutch** language
- Pursuing CFA Level-1 - Candidate

## TECHNICAL SKILLS

Python - ★★★★★

AWS - ★★★

C++ - ★★★★★

Java - ★★

Unix - ★★★★★

# Saurabh Jaiswal



## Career Objective

To seek rewarding career opportunities in Software Research and Development to render purposeful, result oriented service to the organization.

## Profile Summary

- 15 years of Total Experience in **Python Development** and Automation
- 10 Years in Leading Teams, Scrum Master and Project Management
- 8 Years of experience as Solution Architect in multiple projects.
- 3 years in **Artificial Intelligence Development**
- Open-source **Contributor** in **Python Software Foundation**
- Research & Development, Proof of Concepts, SDLC process
- Gathering information from Clients directly and Reporting
- **Agile Methodology and Cloud Technology SME**
- Corporate **Trainer** for Python, Flask and Agile
- Conducting Interviews for Python, Linux, C++
- **Domain Exposure:** Banking, Finance, HealthCare, Digital, Network Security, Energy, CFD, HPSA, Server Automation

## Present Company: Ontoforce, Leuven, Belgium.

Designation: **Python AI Expert**

### Responsibilities:

- Collaborate with teams and other developers to design, develop, test, deploy, and maintain DQ Assistant (Artificial Intelligence System for Health Care)
- Use Artificial Intelligence, NLP technologies, and Cognitive Machine learning to develop DQ Assistant applications
- Maintain and Enhance DQ Assistant platform to meet changing needs
- Build and Refactor Benchmarking tool for DQ Assistant.
- Enhance user effectiveness of Assistant with the help of advanced technologies
- Involve in all the stages of DQ Assistant development from Architecting to implementing
- Act as an expert on the various Artificial Intelligence capabilities and actively participate in future product development opportunities.

## Feather in Career

- **Given Talk as Speaker in, International Conference in Python (PyCon 2016, New Delhi, JNU Convention Centre)**
- Topped in Final Semester of **M.Tech.** With **88.8%** in DIAT DRDO Pune, with **Best Project** Dissertation.
- Earned **Gold Badge - 5 Star** Profile in **HackerRank – Python**
- **Scored IELTS General : Overall Band - 7.0**

## Computer Proficiency/Skill Set

- **Programming Languages** : Python, C, C++, JAVA and Unix Shell Script
- **Operating Systems** : Mac, UNIX, Windows, Linux,
- **Database Systems** : Oracle, Microsoft Access, MySQL, NoSQL
- **Framework** : Flask, Athena, Quartz, Selenium, Django, REST API, FAST API, Data Pipelines
- **Data Science** : NumPy, SciPy, Matplotlib, Pandas, Scikit, Scrappy
- **Agile Tools** : JIRA, Rally, HP ALM, Code /, Bitbucket
- **Web Technologies** : JSP, Servlets, JavaBeans, JavaScript, HTML, CSS
- **Cloud Technologies** : AWS, Lambda, API Gateway, EC2, DynamoDB, RDS, Route 53
- **Network Security** : Metasploit, Snort, NetStumbler, TcpDump, NMap, Ethereal, NetTools, KFSensor
- **Simulation Environment** : MATLAB, NS-2, GLoMoSim, QUALNET, ExtendSim, OpenFOAM, EnergyPlus, R
- **Others** : Confluence, Slack, LATEX, Symphony

## PROJECT MANAGEMENT

Requirement Analysis

Setting Up Milestones

Resources Allocation

Cost Estimation

Planning

Gathering Information from Clients

Work breakdown structure

Designing Strategies in Development

## SEMINARS

- Intrusion Detection System
- Network Simulation
- Modelling of Data Networks
- Network Security

## WORKSHOPS

- Workshop on Cyber Security organized by DIAT/DRDO.
- National Conference in Modelling and Simulation (NCMS-2009)
- National Conference on Computational Engineering: Modelling, Simulation and Optimisation (CEMSO-2010)

## Project Details

- 1. Aug 2024 – Present    Ontoforce, Ghent    Python AI Expert**
  - a. Discover Assistant (Artificial Intelligence System)**
    - As a Python & Artificial Intelligence expert I contributed to build and AI Assistant build on the top of Discover product which is used for research in Health Care Domain for example clinical trials data, medical publications etc. this product is used by clients like Johnson & Johnson, AstraZeneca
    - DQ Assistant is based on Large Language Models which helps user to search and explore during their research
    - It provides capabilities like generation of DQ Query from natural language input and summarizes unstructured text given by user.

**Team Size** : 5  
**Scripting Language** : Python  
**Framework** : OpenAI, ChatGPT, AWS, Microsoft Azure OpenAI  
**Tools Used** : Kubernetes, Docker, Git, IntelliJ IDE, Dude  
**AI Techniques** : LLM, Benchmarking, Embedding, Vectorization, Prompt Engineering, Data Wrangling, Data Pipelines  
**Database** : Solr, Milvus Vector Database, PostgreSQL
- 2. April 2022 – July 2024    KBC Bank, Leuven    Python AWS Expert**
  - b. Kate (Chatbot System)**
    - As a Python chatbot developer, I have created software AI Chatbot (Kate) that use Artificial Intelligence and Machine Learning to communicate with humans (customers) via text or audio.
    - Developing chatbot programs that mimic human conversations and can handle a vast range of scenarios is a primary responsibility.

**Team Size** : 25  
**Scripting Language** : Python, Java  
**Framework** : RASA, AWS, TensorFlow, PyTorch, Pandas, Data Pipelines  
**Tools Used** : Kubernetes, Terraform, Git, Docker, IntelliJ IDE, Podman  
**Database** : MySQL, PostgreSQL, Mongo DB, Dynamo DB
- 3. Aug 2018 – April 2022    JP Morgan Chase & Co.    Assistant Vice President**

**Responsibilities:**

  - Doing Research and POC for new features in Product
  - Sprint Planning and Agile Process Implementation
  - Leading Metrics Workstream to CDO office
  - Designing and Developing Solutions and API's
  - Leading Bengaluru Python Ignite Community
  - Corporate Training on Python and Flask
  - Managing Development Teams and Stakeholders
  - a. Almond**
    - I have designed and developed various Features, Components and APIs in this Product: Asset Liability on Demand (ALMond) which takes positions and send it to various engines for Evaluations and calculate Interest Rate Risk measure.
    - I have implemented various models for Calculations of Cash flows based on Market data, it includes BPV and EOD calculations and generate risk reports.
  - c. Py3 Migration**
    - I have led Py3 Migration of this project for 3 LOBs in which I moved 4000+ unit test and 7000 Bob jobs and syntaxes 500+ scripts from Python 2 platform to Python 3 on Athena Framework.
  - d. Metrics Workstream**
    - I am leading the team of Chief Development Office across 151 Applications To improve 6 Speed Macro Metrics at CTO and CTO-1 Level. Metrics like Standard tool set adoption, Application Maturity, Automated Deployments, Test Coverage etc.
  - e. SDLC Uplift**
    - I have led the SDLC Uplift Initiative to Improve Test Coverage. It improves coverage from 18% to 70% for 80,000 lines of code.
    - Setup CI/CD Pipeline on Jules and Activated Toll Gates
  - f. Athena CIO**
    - Migration of Corp/Sov Bonds on Athena
    - Setting up Jobs in Vita Framework for products like WSL and integration with ALMonD
    - Contributed in Athena Migration of Almond Calculators (Fincalc)

## INTERNSHIP

BHEL 1 MONTH 2007  
CRISP 2 MONTHS 2008

## TECHNICAL JUDGE

Code for Good Event at  
JPMC - 2020

## TEAM MENTOR

Code for Good Event at  
JPMC - 2021

## CHIEF GUEST/PANELIST

- International School of Management Excellence (ISME)
- NRI-Institute of Information Sc. Tech. (NIIST)

### g. Proof of Concepts

- Kafka implementation replacing QPID
- Planning and Designing solution for Migrating Almond Current Engines from Athena Framework to AWS Framework

Team Size : 20

Scripting Language : Python

Framework : Athena, Autosys, Bob Jobs, AWS, Pandas, Data Pipelines

Tools Used : Kafka, QPID, Git, Jules, Splunk, Kubernetes, CI/CD, Plotly

Web server : Apache

Database : Hydra, MySQL, Sybase, PostgreSQL

### 4. Feb 2017 – April 2018 Rakuten Technical Lead

#### a. Log Management (DevOps-System):

- In this project I developed workflows and setup features like logging, monitoring and alerting mechanism for Applications and providing Dashboards with information and statistics collected using those logs.
- Its build using AWS along with multiple **Provisioning and Orchestration** Tools, creating a Graylog Cluster with Elasticsearch and Mongo Db nodes.

Team Size : 5

Scripting Language : Python

Tools Used : Graylog, Stackstorm, Puppet, LibCloud, Docker, Nagios, ELK

Web server : Amazon Web Services (AWS), EC2, ELB, VPN

Database : MongoDB

#### b. ImageOrigin (Web Application-API):

- I have developed a web application which provides APIs for performing transformation on images like resizing, cropping, styling etc.,
- Its build using Serverless Architecture using AWS.
- It serves multiple Image / Video Companies like Viki, Wauki, Showtime,
- I have worked onsite at Singapore Location for Integration of product Viki.

Scripting Language : Python

Framework : Flask, Knockout JS, Material Design, Docker, Data Pipelines

Web server : Amazon Web Services (AWS), Lambda, API Gateway

Database : Dynamo DB

### 5. Dec 2014 – Jan 2017 Accenture Team Lead/ Sr. Consultant

#### a. QzTest UI: (Automation Tool):

- I have developed and designed various features of Qztest for our client Bank of America which is UI Based automation tool for Test Scripts
- It gives ability to automate tests for more than 100 banking applications, completely written in Python and Quartz Framework

Team Size : 15

Scripting Language : Python

Framework : Quartz, Robot Framework

Database : Sandra

### 6. May 2013 – Dec 2014 Mphasis Sr. Software Engineer

#### a. NextGen: Solar (Web Extension on HP SA):

- Developed Web Extensions for HP Server Automation Product known as **SOLutions Automated Rack build** for our client HP Houston.
- Developed user interface which provides real time data of Servers Managed by **HPSA**, which fetches Server Health Monitoring, Mesh Monitoring etc.

Team Size : 7

Operating System : Linux, UNIX, Windows 7, VMware ESX

Scripting Language : Python, Flask, C++, JSON, Shell Scripts, HTML, AJAX, jQuery

Module : Web Extension "Vesta"

Web server : Apache

#### b. HP Server Automation (Onsite HP Location):

- HP Server Automation (**HPSA**), a Cloud Automation portfolio, provides lifecycle management for enterprise servers and is part of HP Software's Data Center Automation Center.
- I have contributed in the development of lifecycle management solution for servers, allowing clients to standardize, consolidate and automate server operations in their Hybrid Data Center.

Team Size : 20

Scripting Language : Python, Shell Scripting, XML

Module : Security & Compliances (Developing content for Audit & Remediation for various policies)

Benchmarks Policies: DISA, CIS, SOX

## Co-Curricular Activities

Public Speaking

Anchoring

Cultural Activities

Sports Events

### 7. May 2012 – May 2013 Hi-tech Outsourcing Services Sr. Software Engineer

#### a. IBO Administration Firewall:

- This project is developed for European client from Norway, I have setup, install, configure , customized Linux-based router/firewall, based on open-source code and develop web-based GUI.
- I have used and configure Linux packages like netfilter, iptables etc., routing, firewall, and NAT must be enabled.

**Team Size** : 1

**Role** : Sr. Programmer Analyst

**Operating System** : Debian

**Scripting Language** : Python, C++, HTML, CSS, CGI, shell scripting

**Webserver** : Apache

#### b. Research on Green IT /Energy Modelling Softwares:

- This is research project its objective is to analyze Green IT technology and Energy Modelling softwares which are developed in python and gain knowledge of market from Energy Consultants and web contacts.
- Write report and document the prospect (Reference: [www.energyswift.com](http://www.energyswift.com)).

**Team Size** : 1

**Role** : Researcher/ Sr. Programmer Analyst

**Research Area** : Green technologies to implement and how to gain knowledge for its software Implementation

**Responsibility** : To Plan and implement strategy for Green IT development

#### c. EnergyMetrics (Energy Saving Simulators):

This project is developed for our US client, it is an integrated tool for Generating Energy Analysis Reports after processing Building Models through **Energy Analysis, HVAC, CFD, and Lighting**. We work on development of Add-ons by customizing Open Design Studio (ODS) in Blender.

It provides solutions for Energy Modelling Ref: ([www.energyswift.com](http://www.energyswift.com))

**Team Size** : 1

**Role** : Sr. Programmer Analyst

**Operating System** : Windows 7, Ubuntu 12.04

**Scripting Language** : Python, C++

**Third party Tool** : Blender, OpenFOAM, EnergyPlus, OpenStudio, ODS, Paraview

### 8. Nov 2011 – May 2012 Musikaar Software Developer

#### a. Automation Script Development:

Developed automation scripts for testing of a web application **Orange** in python. Dashboards, Tabs (photo, video), Downloading, Uploading, Drag Drop operations etc.

**Team Size** : 3

**Operating System** : Windows XP/2003 Server/ 7

**Scripting Language** : Python, XML, Unit Test

**Third party Tool** : Selenium, Xpath (Firebug), SVN, VMware

#### b. Vulnerability Assessment:

- I have developed Nsl scripts to patch the vulnerabilities present in softwares in their various versions which are filed on Telus website by CVE ID.
- I have analyzed the type of vulnerability, CVE ID, Bugtrac id and the platform with their effected versions and then write the Nsl script using NESSUS tool.

**Team Size** : 2

**Scripting Language** : Nsl

**Third party Tool** : Nessus, ESXi – VMware, vSphere Client

### 9. May 2011 – Oct 2011 Tridiagonal Solutions Pvt. Ltd. Project Engineer

#### a. Python RSS Feeder:

This project provides RSS feeds to our clients from SmartFoam (Simulator for CFD analysis and report. we used Open Sources like OpenFoam, Paraview etc.). Its Graphical User interface is developed on Python using Smart Traits.

**Team Size** : 1

**Operating System** : Windows, Linux

**Scripting Language** : Python

**Third party Tool** : Python GUI libraries (tkinter, wxwidget), PyQt, Smart Traits

#### b. Windows Porting of OpenFOAM:

In this project "Openfoam on windows port with parallel support" I have successfully done compilation of compilers like mingw32 and then Cross compiled whole Openfoam 1.7.0 for windows 32 /64 bit with customized code. Then Develop UNIX Shell Script for Automation of this whole process end to end.

**Team Size** : 1

**Operating System** : Windows XP/2003 Server/ 7, OpenSuse, CentOS

**Scripting Language** : C++, GCC, DLL, Unix Shell scripting

**Third party Tool** : OpenFOAM, VTK, GDB, MPI, Mingw, Dependency Walker

## PERSONAL PROFILE

Date of Birth: 3<sup>rd</sup> Sep  
1986

Passport : Available

## LANGUAGES

English ★★★★★

Dutch ★★ ★

French ★★ ★

Hindi ★★★★★

Gujarati ★★ ★

Marathi ★★ ★

## INTEREST

Reading Books

Listening Music

## HOBBIES

Table Tennis

Playing Guitar

## STRENGTHS

Optimistic

Punctual

## VOLUNTEERS

○ Mahita

(Education for Women)

○ Good Works

(Building Houses for Poor)

○ Skill Development

(English/Soft Skills)

## a. Security Issues in Wireless Network:

(Mentor: Prof. MM Kuber – Scientist 'E' DRDO, Pune India)

- Research and Analyze the current scenario in wireless network security arena by experimenting by various setups, which includes devices (WiFi, Bluetooth, Zigbee etc.) and various wireless standards like 802.11 a/b/g/n.
- I have done experimental setup of Snort for wired networks and Kismet, NetStumbler for wireless networks to analyze Intrusion detection System (IDS) and Intrusion Prevention System (IPS). It includes study of Adhoc networks and its routing algorithms (AODV, DSR etc.)

**Team Size** : 1

**Operating System** : Windows XP/2003 and Linux (Red Hat, Fedora, Ubuntu)

**Scripting Language** : C, C++

**Hardware** : D-Link Access Point, Firewalls, IDS/IPS,

**Third party Tool** : GloMoSim, NS2, Cygwin, Snort, NetStumbler, Kismet, TcpDump, NMap, Ethereal

## b. Modelling and Simulation of Network Security:

(Mentor: Dr. RN Pralhad – Scientist 'F' DRDO, Pune India)

Research and Development on Network Models by experimentation and validation on real time system based on **Machine Learning Algorithms**.

- Evaluation of **Network Security Situation** (NSS) using weighted model and wavelets than **Prediction of NSS** using Grey Theory.
- **Threat Assessment** is done by Reverse Engineering using Genetic Algorithm on predicted NSS value.
- Combined Wavelet Grey theory model proposed for Network Security with Reverse engineering for the first time.

**Team Size** : 1

**Operating System** : Windows XP/ Vista/ 7 and Linux (Ubuntu, Red hat)

**Scripting Language** : MATLAB, Python, C++, JavaScript

**Third party Tool** : MATLAB, QualNet, NS2, MetaSploit, Snort, NetTools, KFSensor, NMap, Ethereal, TcpDump

## Harmony (Social Networking Website)

This project is an Online Web based application developed for connecting network of friends & communities. In this we can add profile and performs various operations on it like Insertion, Updation, Deletion of Scraps, Messages and Photos etc.

**Team Size** : 3

**Operating System** : Windows and Linux

**Scripting Language** : JAVA, MySQL

**Technology Used** : **Java Server Pages (JSP), JavaBeans, JavaScript.**

**Database** : Oracle 8i

**Web Server** : **Jakarta-Tomcat-5.0.0.** (For standalone system)

## Campus Drive (Web Application for Training Placement System of College)

This project is an Online Web based application developed for Training and Placement Cell of any college, this application helps Training Placement Officers (TPO) or by Human Resource (HR)

- Mobile Messaging
- Automatic Emailing
- Online Registration

**Team Size** : 4

**Operating System** : Windows and Linux

**Scripting Language** : JAVA, MySQL

**Technology Used** : **Java Server Pages (JSP), JavaBeans, JavaScript.**

**Database** : Microsoft Access

**Web Server** : **Jakarta-Tomcat-5.0.0.** (For standalone system)

## Achievements

- Awarded Junior Research Fellowship by DIAT DRDO, Pune in 2008.
- Selected in Top 5 all-round personality of M.P. in Global Leader Contest organized by Scratchmysoul.com
- Won Academic trophy and Sports trophy of the year for "Tilak House" as House Captain 2004 and House Vice Captain 2003 for 2 consecutive years
- Chief Coordinator in State Level Event NOVIZIO-2K8
- Won Inter College Table Tennis championship organized by ISTE.
- Semi-finalist, Quarterfinalist and Pre-quarter finalist in National Level Technical Table Tennis Events in MANIT Bhopal, COEP Pune and PVG Pune respectively.

**Date:** 10<sup>th</sup> Feb 2025

**Place:** Leuven, Belgium

**[Saurabh Jaiswal]**