

## Vinay Singh

**Sr. Software Developer/Database Developer & Architect** (Co-founder MicroTechnologies)

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### Professional Summary

- 10years of work experience in Development using C, C++98, C++11, ReactJS, NodeJs, JS, PHP, Matlab, MySQL & Oracle, BI, Data Visualization.
- Experience in all phases of software development life cycle.
- Experience in design pattern **Singleton, Builder, Factory Method etc.**
- Experience in micro services.
- Dashboard designing, data visualization using Tableau, Power BI, Advanced excel, canvasJs etc.
- Good understanding of OOP's Concept.
- Good understanding of linear data structure like linked list, stack, queue, searching, sorting etc.
- Experience with databases including **Oracle, PL/SQL and MySQL involving stored procedures, triggers, events, functions, indexes, optimization, high level schema design etc.**
- Hands on experience of tools like **Dev-C++, Sublime, Visual Studio Code, Vim**
- Worked on various flavors of **LINUX** operating system like **Suse, Ubuntu, RedHat.**
- Hands on experience in **VPN, Putty, WinSCP, VNCviewer** etc.
- Hands on experience in project management, **CI/CD** tools like **Git, Jenkins, JIRA**
- Basic of experience in **Linux Shell Script.**
- Worked on Memory Leak detection tool like **Valgrind.**
- Involved in meetings to gather information and requirements from the clients.
- Research-oriented, motivated, proactive, self-starter with strong technical, analytical and interpersonal skills.

### Technical Skills

Programming Languages, OS & Frameworks	Years of Exp.
C, C++ (Windows & Linux), C++98, C++11	3 Years
Oracle10g/11g/12c, MySQL, Database designing, database architect	8 Years
AWS, RDS, MongoDB, Elastic Search, BI using Tableau, Power BI, Advanced Excel, Informatica	4 Years
Node Js, ReactJS, Express Js	3 Years
PHP, HTML, CSS, JavaScript, ES6, AJAX, XML, WAMP, CPanel, Angular, MySQL Client (HeidiSQL, Adminer, PHP Myadmin, RemoDB).	4 Years
Eclipse, WinScp, Putty, TeamViewer, VMware, Oracle Virtual BOX, Valgrind, Dev-C++, Juice SSH, SSH Client	6 Years
Python, Prolog, Android SDK, TCL, AWK, Shell	1 Years
Git	4 Years
Visual Studio C# & VB.Net	2 Year
Lucid Chart, Star UML	2 Years
Private cloud infrastructure implemented from scratch, Dell R730, Citrix Xen Center, VM's, HP Machines.	Live since 2015

### Professional Work Experience

**#Project:**

**Title:** Payroll and product shipments management and BI analytics (SMPL).

**Description:** This project mainly designed and developed for the purpose of advanced level of accounting work including shipments detail, sells analysis, and it also capable to data analytics for the business growth.

**Technologies:** Client Server, HTML, JS, AJAX, JQuery, Angular, Bootstrap, PHP, C, C++, MySQL, Apache, UNIX, Corn, Python, Adminer, Android Studio, Canvas.JS, Tablaue.

**Duration:** 6 Months

**#Project:**

**Title:** UG-to-PG means digital marketing reporting and dashboard design to increase conversions to and get admission in university.

**Technology user:** Tablaue, Dashboard Design.

**#Project:**

**Title:** MedxCart Pharmacy Company maximized operational efficiency, also to increase sells.

**Technology user:** Power BI, Dashboard Design.

**#Project:**

**Title:** BI IMPLEMENTATION OF DIFFERENT TUTORING SYSTEM TO ENHANCE STUDENT LEARNING

**Technology user:** Matlab, Advanced Excel, Charting, Dashboard, Dataset

**#Project:**

**Title:** Enterprise resource planning (ERP).

**Description:** This project mainly designed and developed for the purpose of enterprise resource planning. It has included high level features like hierarchical process of user enrollment, dynamic role management, role transfer, transport management, document management and filtering process, lead distribution, project management, account features, attendance management, library management, CRM, online recruitment management, notification service, alert system, resource management, analytics etc.

**Technologies:** Client Server, HTML, JS, AJAX, JQuery, NodeJS, ReactJS, Bootstrap, PHP, MySQL, Apache, UNIX, Corn, Python, Adminer.

**Duration:** 12 Months

**#Project:**

**Title:** Smart village mart

**Description:** The Major aim of the project is the villages are that they are not connected with the latest technologies. As technologies are growing day by day but due to the not awareness and less knowledge of education most of the villagers are not too much uses the technology in his knowledge, business, buy and sell the things. So, our solution will help to the villagers to educate them and provide education to every age group via some symbolic figures and voice instructions as well. We will also provide computer and technology knowledge with some advanced learning approaches. The another motive is that the software will helps to them to sell out the handcraft materials over the app, similarly we will provide knowledge to improve income through own produced products. The app will also help to the villager to start own business thorough it with own independent credentials.

**Technologies:** Client Server, HTML, JS, AJAX, Angular, JQuery, Bootstrap, NodeJS, ReactJS PHP, MySQL, Apache, UNIX, Corn, Python, Adminer, Android, JAVA, Cloud, Android studio, Machine Learning.

**Duration:** 6 Months

**#Project:**

**Title:** e-learning advanced software app.

**Description:** This software is mainly designed for the educational organization, it consists two major modules like admin hierarchy as well student role. This software consist all major functions goes in the educational organization, like student data management, subject management, subject allocation, TG, account, digital library, syllabus mapping, note/solution

upload in all file format including youtube link as well, open chat forum, synchronized with unix terminal, Lab record management, project management including video, audio, zip, pdf, word as well project hosting.

**Technologies:** Client Server, HTML, JS, AJAX, JQuery, Bootstrap, PHP, C++, MySQL, LINUX, Windows, Apache, Remote database, cloud, Android etc.

**Duration:** 3 Years

#### **#Project:**

**Title:** Stock and complain management.

**Description:** This software is mainly designed for the manage A-Z stocks of the organization and generate the alert system. This project including multiple level of authentication role for the user hierarchy like organization owner, level1, level2, level3 and level4 roles managements with own functions. Here users can generate requirements and also can complain for the resources to the upper managing authority. All arrived complain will be automatically transferred to the higher authority in to every 7 days if that get not resolved in given tenure.

**Technologies:** Client Server, HTML, JS, AJAX, JQuery, PHP, MySQL, C, C++, LINUX, Windows, Apache, Remote database, Android studio, cloud etc.

**Duration:** 10 Months

#### **#Project:**

**Title:** Data center App.

**Description:** This software is mainly designed for the managing student data along with counselor associated those students. In this application software I have applied the concept of data analytics which will helps to improve the accuracy of the admission as well working quality improvement of the counselors. It has multiple features like student registration, revenue analysis report, multiple organization management, user level management, area/school/team wise analysis report etc.

**Technologies:** Client Server, HTML, JS, AJAX, JQuery, PHP, Bootstrap, React JS, Oracle, C, C++, LINUX, Windows, Apache, Remote database, Android studio, AWS cloud etc.

**Duration:** 8 Months

#### **#Project:**

**Title:** CRM.

**Description:** This software is mainly designed for the campus recruitment management. In this application software the placement officer can manage the student record, placement record, company visit, and selection status and technology identification of the students. This application also contains a technical blog forum where everyone can post his/own interview and technical interview experiences, tools also included an open discussion technical forum for users etc.

**Technologies:** Client Server, HTML, JS, AJAX, JQuery, PHP, MySQL, ReactJS, Bootstrap, LINUX, Windows, Apache, Remote database, cloud etc.

**Duration:** 8Months

#### **#Project:**

**Title:** Lead management.

**Description:** This software is mainly designed for the managing various tasks of the teams working on different areas and projects with all details and documents managements. The software has multiple features like team registration, client booking, transaction management, revenue analysis report, hierarchical organization management, user level management etc.

**Technologies:** Client Server, C++, ReactJS, Oracle, Windows, Deployment, Cpanel for remote database hosting etc.

**Duration:** 1 Year

#### **#Project:**

**Title:** Classification of Heart Disease using knnnga based classifier and ACO optimizer.

**Description:** This machine approach was mainly developed for the purpose of to improve the detection rate of the implemented algorithm for the heart disease. In data mining classification (supervised learning) which can be used to design model by describing significant data classed, where class attribute is involved in the construction of the classifier. The software was more efficient and proficient for pattern recognition. The samples of the medical databases are classified on the basis of nearest neighbor in which medical database are massively found in nature and contains irrelevant and redundant attributes. The only KNN classifier produces less accurate results that is why we use hybrid approach of KNN with ACO.

**Technologies:** C, C++, Matlab2012A, m file scripting, heart disease dataset, machine learning.

**Duration:** 6 Months

#### **#Project:**

**Title:** An Intrusion detection system.

**Description:** This project is designed and developed for the intrusion detection and prevention against blackhole, greyhole and DDoS attack, the method consists various approach like dynamic buffer management, AES security, election algorithm etc.

**Technologies:** NS2, C++, TCL/TK, AWK, XGRAPH, UNIX.

**Duration:** 6 Months

#### **#Project:**

**Title:** A hybrid approach for satellite, X-ray and ECG signals improvements.

**Description:** This project is designed and developed for the improvements of low intensity-based images and signals. As we see that some medical images are old or quality degrades so the treatment is not possible for the doctors. Similarly images taken from the satellite is not clear due to the distance. And sometimes human ECG signals are not properly marked due to the amplitude or humming. So for all the concerns I have developed software which improves the quality of all discussed problems.

**Technologies:** Matlab, C++ m file scripting, filter design, canny edge detection, brightness preserving, contrast enhancement, HE, Kernel, fusion DWT etc.

**Duration:** 10 Months

#### **Achievement / Awards**

- In my mentorship, the project **"Wild Life Safety Using Internet of things and Artificial Intelligence"** selected in **Smart India Hackthon 2020**.
- In my mentorship the project **"Smart village mart"**, has been selected in **"AICTE CHHATRA VISHWAKARMA AWARDS-2019"**.
- Secure network of Sagar Manufacturer Pvt. Ltd. received "security expert award" for defending against **Ransomware attack** and cyber security (Aug-Sep 2019).
- In my mentorship, the project **"MSME: Development of GPS and satellite imagery-based Tsunami alert mechanism"** selected in **Smart India Hackthon 2019**.
- In my mentorship, the project **"Android based alert system for ministry of transport and highway authority of INDIA"**, selected in **Smart India Hackthon 2018**.
- Received best technology award for **"Database Design and development"** in year 2017 from MY FM 94.3 and Danik Bhaskar, M.P.

#### **Research/Publications**

- A paper entitled **"GCRP: Grid-cycle routing protocol for wireless sensor network with mobile sink"**, AEU - International Journal of Electronics and Communications, ELSEVIER, ScienceDirect, IF 2.8, Volume 94, September 2018, Pages 1-11.

- A paper entitled **“A pattern Optimization for novel class in multiclass Miner for Stream Data Classification”**, accepted in **IEEE, Elsevier, IDES** in CIIT ACEEE Conference, and also selected in **IDES and Springer** in the IPC (IPC2013 510F) ACEEE journal, Malaysia.
- A paper entitled **“Survey on Pattern Optimization for Novel Class in MCM for Stream Data Classification”**, selected in **IJESRT Journal** with ISSN: 2277-9655.
- A Paper **"Face Detection Using KNN-HBF Technique"**, has been accepted (15-feb-2016) in **Sixth International Conference on Advances in Information Technology and Mobile Communication – AIM 2016, McGraw-Hill Education**, and will be indexing in all the major indexing services like **EI, ISI Web of Science, DBLP, IET Inspec, Scopus** and etc.
- A Paper **“An improved pattern Optimization approach for novel class in multi-class Miner for Stream Data Classification"**, has been accepted (15-feb-2016) in **Sixth International Conference on Advances in Information Technology and Mobile Communication – AIM 2016, McGraw-Hill Education**, and will be indexing in all the major indexing services like **EI, ISI Web of Science, DBLP, IET Inspec, Scopus** and etc.
- A paper **“Face Detection in Hybrid Color Space Using HBF-KNN”** has been published in **INTERNATIONAL CONFERENCE ON RECENT ADVANCEMENT IN COMPUTER AND COMMUNICATION (IC-RAC-2017), Springer**.
- A paper **“Detection and Prevention Scheme against Jamming Attack in MANET”** has been published in **INTERNATIONAL CONFERENCE ON RECENT ADVANCEMENT IN COMPUTER AND COMMUNICATION (IC-RAC-2017), Springer**.

#### **Educational Qualification**

- **B.E. in Computer Science**, year 2006 from **UIT BU Bhopal MP, India**
- **M.Tech in Computer Science**, year 2013 from **UIT BU Bhopal MP, India**