PERSONAL INFORMATION

Surendra Choudhary

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Sex Male| Date of birth 16/12/1991 | Nationality Indian

WORK EXPERIENCE

Sept 2023 to Present

Digital Consultant – Software Strategy
Syngene International, Govt. Of Raj, Hero Moto Corp, Microland Inc.

- ETL Development: ETL, Python, Selenium, NodeJs, Javascript, C#, .NET, Redis, NoSQL, SQL Server, REST APIs, ODBC connectivity.
- Data Integration: Extract, transform, load (ETL) from lab systems (gLIMS, MODA, LabWare, Thermo Fisher) and flat files (Excel, CSV).
- Compliance & Validation: Support for GMP, ADLC plans, SOPs, validation specs.
- Programming & Automation: Python, .NET, REST API development, Azure, Google Cloud Vision.
- Reporting & Analytics: Power BI, SQL queries, audit trail analysis.
- Develop and deploy AI-powered automation workflows using industry-standard tools.
- Design custom agents and pipelines using frameworks like LangChain, OpenAI API, and vector databases.
- Integrate AI solutions with business operations and existing systems.
- Conduct research and evaluation of emerging AI tools, models, and APIs.
- Build intuitive user interfaces and internal tools to interact with AI systems.
- Develop clear and concise technical documentation, including user manuals, API documentation, and code comments, accessible to various technical skill levels.
- Design user interfaces that are intuitive and user-friendly, catering to diverse user groups based on their technical proficiency.
- Develop educational software or applications that teach programming or other technical concepts.
- Collaborate effectively with government bureucracy - SDM, SDO, DC, DoIT, CEO, DEO, ABCEO, ABDEO, data scientists, engineers, product teams, clients, and project managers to align AI capabilities with business goals, understand requirements, and provide project updates.
- Ensure model accuracy, performance, and responsible AI usage.
- Participate in project planning and review meetings, contributing technical input and addressing project-related concerns.

Aug 2019 to Aug 2023

Associate Manager- Digitalization
Bharat Aluminium Company Ltd (Subsidiary of Vedanta Ltd. – 51% stake & 49% with Government of India), Balco Nagar, Korba, Chhattisgarh - 495684

https://www.balcoindia.com/

Technical Skills:

- **Mobile App Development:** Xamarin Forms, Xamarin.iOS, Xamarin.Android, C#, MVVM, XAML, Android Studio
- **Web & Backend Development:** ASP.NET Web Forms, C#, TypeScript, ASP.NET Core, Entity Framework, Web API, Blazor, Python, REST API, JSON, Unit Testing, Winforms, WPF, CI/CD, Git, Avalonia , Unity3D

- **Frontend Development:** Angular, JavaScript, Node.js
- **Database Management:** SQL Server, SQLite
- **Cloud Technologies:** Firebase, Google Cloud Vision, Microsoft Azure Computer Vision
- **Scripting:** Python, Power Shell, C# Scripting
- **Machine Learning:** Python TensorFlow, Keras (LSTM), Auto ML .NET, Power Bi
- **Computer Vision:** Object Detection (PPE, Face Mask, Virtual Machine Guarding, People Counting)
- **Data Acquisition & Integration:** Web Scraping, Network Communication (MES, Web Apps), Load Cells, COM Ports, RFID, IP Cameras

Deep Learning: Process Control, Temperature & Material Consumption Prediction
Full Stack Developer

Developed and maintained over 10 cross-platform mobile apps (Android & iOS) using Xamarin for automation and code sharing, improving development efficiency.

- Supported and enhanced functionalities of existing MES and web applications (around 50) crucial for continuous manufacturing operations.
- Built web applications using ASP.NET frameworks (Web Forms, Core), SQL databases, Web Services, and REST APIs for data management and integration.
- Leveraged Python (Flask) to create standalone scripts and REST APIs for various functionalities.
- Implemented Text OCR solutions using Microsoft and Google Cloud Vision APIs to convert readings from analog meters to digital format, saving infrastructure costs and improving data capture for field engineers.
- Developed Python scripts utilizing object detection models for tasks like Personal Protective Equipment (PPE) detection, Face Mask detection, Virtual Machine Guarding, and People Counting, enhancing safety and operational awareness.
- Deployed real-time web scraping scripts to gather data from Indian government power exchange platforms. Integrated push notifications to alert power sales, plant, and coal handling teams about power demand changes, optimizing response time.

- Employed deep learning (Tensor Flow, Keras) to develop models for Pot-line process control, predicting temperature and AlF3 consumption to minimize energy consumption.
- Designed and implemented a system for end-to-end automation of 12 weighbridges within the plant, utilizing a combination of .NET, Python scripts, load cells, COM ports, RFID, and IP cameras with live image recognition for efficient material management.

Business or sector Metals and mining sector

Assistant Manager- Automation
Vedanta Resources Plc., Vedanta Ltd., Jharsuguda, Orissa, India – 768201
Nov 2013 to Jun 2019   www.vedantaaluminium.com,
Technical Skills:

- **Automation Expertise:** Extensive experience with Programmable Logic Controllers (PLCs) and familiarity with Variable Frequency Drives (VFDs), motors, and industrial control systems.
- **MES Integration Potential:** Knowledge of process control and data management aligns well with the requirements of Manufacturing Execution Systems (MES).
- **.NET Core Development:** Skilled in .NET Core development, capable of building custom applications and integrations
- **Laboratory Automation Experience:** Experience with automating laboratory instruments and workflows using software development.

- LabWare LIMS expertise: configuration, integration of lab instruments, interfaces with external applications, peer code reviews, and scientific software integration.

  Additional Skills:

- **Spectroscopy & Instrumentation:** Proficient in operating and maintaining various analytical instruments like XRF, XRD, OES, UV, AAS etc.
- **Material Testing:** Experienced in utilizing equipment for material characterization, including tensile strength measurement, hardness testing, and various meters.
- **Inventory Management:** Skilled in spare parts planning, purchase requisition creation, and inventory management practices.
- **Quality & Safety Management:** Adherence to industry standards like ISO (9001, 14001, 18001), NABL, and HIRADEC. Experience with SOPs, ESOPs, work permits, and safety protocols.
- **Project Management:** Knowledge of SAP PM based maintenance systems and project planning methodologies.

Aluminum Smelting Expertise:

- In-depth understanding of 1.75 MPTA aluminum smelter operations, including 340 kA potlines, Pot startup procedures, bath and pot measurement techniques.
- Experience in carbon anode manufacturing, green anode plant operations, rodding, bake oven operations, and quality control for anode production.

  Proficiency in cast house operations, including ingot, billet, and wire rod casting, along with metallographic and inclusion analysis of finished products.

Additional Contribution:

- Served on the CEO team for coal procurement, improving the Gross Calorific Value (GCV) of coal for 3615 MW coal-fired power plants. Managed raw material handling and testing within the smelters.

Business or sector Metals and mining sector

Assistant Systems Engineer Trainee

July 2013 to Nov 2013   TATA Consultancy Services, Chennai, India
www.tcs.com
Technical Skills:

- **Programming Languages:** Java, JavaScript
- **Front-End Development:** HTML, CSS
- **Web Development:** Java Servlets
- **Database Management:** SQL Query Writing, DBMS experience
- **Software Development Lifecycle (SDLC):** Waterfall, V&V (Verification & Validation), Incremental, Spiral, Agile
- **Testing:**
  - Manual Testing: Unit Testing, Integration Testing, System Testing, White Box Testing (Unit, Integration), Black Box Testing
  - Automated Testing: Tools like QTP, Selenium, HP LoadRunner, TCS Master Craft
- **Documentation:** Experience with SRS (Software Requirements Specification), HLD (High Level Design), IQA (Internal Quality Assurance), EQA (External Quality Assurance)

Project Management:

Successfully led global meetings and coordinated with on-site and Wipro teams across multiple countries to ensure project completion.

- Business or sector Information Technology sector

EDUCATION AND TRAINING

Bachelor of Technology in Instrumentation and Control Engineering

July 2009 to June 2013

SRM University, Kattankulathur, Chennai (UGC approved) www.srmuniv.ac.in

Relevant Coursework:

- **Circuit Analysis:** Electric Circuits & Networks, Electronic Circuits
- **Electronics:** Electronic Devices, Linear Integrated Circuits, Digital Systems
- **Control Systems:** Control Systems, Microprocessors & Microcontrollers
- **Instrumentation & Automation:** Industrial Instrumentation & Automation, Electrical & Electronics Measurements & Instrumentation, Analytical Instrumentation, Instrumentation in Petrochemical Industries, Iron & Steel Industries

- **Engineering Fundamentals:** Engineering Graphics, Engineering Mechanics, Thermodynamics & Fluid Mechanics

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PERSONAL SKILLS

Mother tongue(s)

Hindi

Other language(s)

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Spoken interaction	Spoken production	
English				
Proficient User	Proficient User	Proficient User	Proficient User	Proficient User
IELTS: 7.5				
German				
Basic User	Basic User	Basic User	Basic User	Basic User
A 2				
French				
Basic User	Basic User	Basic User	Basic User	Basic User
B- in SRM University Transcripts				

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Communication skills

Confident Presenter: Developed strong presentation skills through university Personality Development classes and Tata Consultancy Services' Initial Development Programme.

Multilingual Communication: Successfully communicated with clients from 10+ countries during my time as an Assistant Systems Engineer Trainee at Tata Consultancy Services. This experience honed my ability to adapt communication styles and ensure clear understanding across diverse audiences.

Organisational / managerial skills

Team Leadership: Proven ability to lead and motivate teams. Successfully managed a team of 10 at Sesa Sterlite Limited (current role) and a team as a coordinator for AIESEC.

Project Management: Adept at organizing and managing projects, ensuring tasks are

Job-related skills

completed efficiently and deadlines are met (can be added if applicable based on your experience).
Software Development: Possess expertise in various technologies including ASP.NET, Xamarin, Power BI, SQL, SSRS, web services, and mobile app development (Android & iOS).
Database Management: Skilled in SQL query writing and database management systems (DBMS).
Testing: Proficient in software testing methodologies honed during my time at TCS.
Programming Languages: Familiarity with programming languages like Java, JavaScript, HTML, CSS, and Servlet development practices.
Software Development Lifecycle (SDLC): Understanding of various SDLC models gained through my experience at TCS.

Quality Control: Proficient in quality control processes, leveraging current experience in the SSL quality department.
Metrology & Instrumentation: Skilled in instrument maintenance, ensuring equipment functionality within SSL's manufacturing environment.
Safety & Risk Management: Certified First Aider, adept at conducting job risk assessments to ensure safety in the SSL manufacturing unit.
Standards Compliance: Deep understanding of NABL, ISO, and IMS standards gained through work within the SSL quality department.

Computer skills

- Programming Languages & Frameworks: ASP.NET, Xamarin
- Data Management & Analytics: Power BI, SQL, SSRS, SQL Query Writing
- Web Development: Web Services
- Mobile Development: Android & iOS Mobile App Development
- Software Development Tools: Microsoft Office Suite (mention specific tools like Word, Excel, etc. if relevant)
- Testing: Software Testing (mention specific methodologies if you have them)
- Simulation Software: PLC Simulators, Spectrometer Simulators

Driving licence

- B issued by Indian Government

ADDITIONAL INFORMATION

Publications

- Published paper on **Improvement in analysis of Quinolene Insoluble Results (QI) in Coal Tar Pitch** with ID **IJSRDV3I30420** in International journal for Scientific Research & Development

Projects

- A Non-Invasive Method To Facilitate the Disabled Using Eye-Movement Controlled Human-Computer Interface, Several Kaizen projects in Vedanta Limited (more than 20).

Honours and awards

- Got recognized for various kaizen projects and activities in Vedanta limited.

Memberships

- Saint John Ambulance- First Aid Organisation

References

- Dr. PKN Raghavan – pkn.raghavan@gmail.com
- Nurmesh Bhartiya - nurmeshbhartiya.c@ktr.srmuniv.ac.in

ANNEXES

Documents annexed to CV.
- Copies of degrees and certificates.
- Testimonial of employment or work placement.
- Extra certificates.