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Professional Summary:

Experienced Lead Consultant with over **14+ years** of expertise in cognitive process automation, specializing in WorkFusion ML, Generative AI and data sciences. Proven track record in developing ML models and implementing data science techniques to address business requirements. Skilled in designing ML & RPA life cycles using WorkFusion Machine Learning, ODF2 and AutoML SDK, successfully deploying cognitive bots in production environments. Proficient in creating custom ML workflows, applying data preprocessing techniques, and optimizing model performance. Recognized for outstanding project delivery and adept at collaborating with cross-functional teams. Experienced in Java technologies and Agile methodology. Passionate about mentoring junior engineers to enhance their technical skills, I am committed to continuous learning and professional development in the rapidly evolving field of cognitive process automation and data sciences. I have successfully served clients across diverse industries including **banking, insurance, and healthcare**. Additionally, I have acquired over **40+ certifications** in automation from the Workfusion Automation Academy.

Career Profile:

- Working since Nov 2024: Mphasis Limited, Chennai.
- Nov 2018 Oct 2024 : Infosys Limited, Chennai.
- Oct 2015 Nov 2018 : Cognizant Technology Solutions, Chennai.
- Dec 2011 Oct 2015 : Xerago E-Biz Services Pvt. Ltd, Chennai.
- June 2010 November 2011: Sans pareil it services Pvt Ltd, Chennai

Hackathon events:

- Leveraging GenAI & Extensibility Document intelligence : 2nd Place (Infosys)
- Application FAQs intelligence: 1st Place (Infosys)
- Chatbots in customer service : 2nd Place (Cognizant)

Websites, Portfolios, Profiles:

- https://automationacademy.com/learn/user/profile.php?id=205
- https://www.linkedin.com/in/sudhakar-govindaraj-74107669/

GenAI-POCs

- https://xyzabc.streamlit.app/ LLM model using Langchain
- https://doc-assist-ai.streamlit.app/ Document Assist using OpenAI
- https://insurance-charge-ai-pycaret.streamlit.app/ MlOps-AutoML

Visa status:

• Canada: August 2021 to July 2023(Expired)

Academic Qualification:

• BE (computer science -2010), Roever Engineering College. Anna university- Chennai.

Certification:

Gen-AI	Generative AI Landscape		WorkFusion/ ML Application Monitoring	Citizen AI Developer
	OpenAI GPT Models			Using ML Models ODF2.0
	Behavior of Large Language Models			Digital Worker Working with Tara
	Prompt Engineering			Digital worker Working with Evelyn- AMM and NSS
	Deep Learning			Intelligent Automation for Banking
	LangChain for LLM Application Development			Workfusion Automation Engineer Specialist
	LangChain: Chat with Your Data			AA Certified Advanced RPA Professional
	Multi-Agents, Agentic RAG			UiPath RPA Solution Architect - Completion Diploma
	Generative AI for business with Microsoft azure OpenAI			UiPath RPA Developer Advanced Certification
	AI-first Software Engineering			Elasticsearch with Logstash and Kibana
	LlamaIndex, Claude anthropic, Ollama			
Data Science	Python for data science and machine learning			Easy Application Monitoring using Dynatrace
	Auto ML MLOps			
	DVC and Git For Data Science			

Technical Skills:

Domain	Banking, Insurance and Health Care			
WorkFusion	Auto-ML, IACD Studio, ODF 2, RPA, Cognitive Model, Workspace, AI Digital Workers, Mesos, Marathon, Nexus, Amazon S3 Minio,			
Languages	Java , Python			
Machine Learning & Gen-AI:	SciKit Learn, NLP, Streamlit, ,OpenAI, Langchain , Multi-Agent, Ollama, LlamaIndex, Prompt engineering			
Data Visualization	Matplotlib and Plotly			
Data Mining	Pandas, Numpy			
BI	Tableau, Kibana ELK			
RPA Tool	Workfusion RPA, UiPath , Selenium			
Web Technologies	HTML, JSP, Servlet, JavaScript, Ajax, JQuery ,XML,XSLT			
RDBMS	Oracle,MYSQL			
Database Connectivity	Liquibase, JDBC, Spring JDBC Templates, ORM			
Frameworks	Spring Boot, Hibernate, Liferay, API			
Tools/IDE	Workfusion Studio, Eclipse, Net beans , TOAD, Mail Server, Log4j			
Application Server	BEA Web Logic10.3, Websphere			
Web Server	WebSphere Portal, Apache tomcat			
Operating Systems	Windows, Linux(UBUNTU)			
Configuration Tools	GIT, SVN, Mercurial			
Testing Tools	Mockito-junit, Code Coverage			
CI / CD	Jenkins, Sonar			

Projects:

Generative AI Use cases:

Role : Generative AI - Lead Consultant

Domain : Banking **Client Name:** UBS

Technologies: OpenAI, RAG, Microsoft Azure OpenAI, LlamaIndex, Multi-Agent, Langchain,

Streamlit, Python

Use case 1: Policy Document Intelligence

The Policy Document Intelligence Questions and Answers project leverages generative AI technology, including Microsoft Azure OpenAI and RAG, LLM models, to streamline the analysis of multiple policy documents. With proper vectorizing and question optimization, our system provides accurate answers to complex queries. Through multi-agent implementation, answers are re-ranked for improved relevance. This innovative solution revolutionizes policy document management, saving time and resources while enabling informed decision-making. The project represents a significant advancement in document intelligence, enhancing the efficiency and effectiveness of policy document analysis

Use case 2: SAS to Python code translator

Implemented a cutting-edge generative AI solution to translate a significant amount of legacy SAS code into Python, addressing the challenge of converting 5K to 7K lines of code, including complex macro scripts. Developed a sophisticated segmentation and chunking strategy to ensure smooth translation without losing the context of the code segments. Utilized advanced generative AI techniques to accurately convert SAS code to Python, enhancing efficiency and minimizing errors in the process.

Use case 3: Python code Review and Accelerator

Executed a comprehensive Python code review and best practices implementation for a legacy codebase that lacked adherence to modern standards and best practices. Faced with a substantial amount of unstructured code with inadequate documentation and comments, the challenge was to optimize code quality, security, and performance while enhancing overall code readability. Implemented a solution that effectively handled large lines of code, introduced best practices, and significantly improved code quality, security, and performance for enhanced maintainability and efficiency.

Use case 4: Database Assist

Engineered a state-of-the-art solution enabling Subject Matter Experts (SMEs) to engage with a database via natural language input, eliminating the necessity for frontend or backend applications. Utilizing advanced generative AI multi-agent technology and prompt engineering methodologies, devised a complex system that empowers users to seamlessly interact with the database through conversational queries. This groundbreaking methodology enhances user experience and accessibility for SMEs, streamlining data retrieval and manipulation processes without the limitations inherent in conventional application development practices.

Role: Lead Consultant - Generative AI

Responsibilities:

- ➤ Develop and implement cutting-edge generative AI solutions for translating legacy SAS code into Python, utilizing advanced techniques such as deep learning and natural language processing. Design sophisticated segmentation and chunking strategies to ensure accurate code translation without compromising context.
- ➤ Drive the optimization of code quality, security, and performance in legacy Python code through comprehensive code reviews and best practices implementation. Utilize static code analysis tools and code profiling techniques to identify and address potential vulnerabilities and inefficiencies.

- Establish modern standards and best practices in the codebase, including thorough documentation, version control, and code refactoring. Implement design patterns, code optimization techniques, and error handling strategies to improve code readability, maintainability, and efficiency.
- ➤ Collaborate with Subject Matter Experts (SMEs) to engineer innovative solutions for database interaction using generative AI multi-agent technology and prompt engineering methodologies. Integrate advanced database management systems and AI algorithms to enable seamless user engagement with the database through natural language input and conversational queries.
- ➤ Provide technical guidance and mentorship to junior developers, organizing knowledge sharing sessions and training programs to foster innovation and excellence in generative AI development practices. Lead the team in exploring and implementing cutting-edge AI techniques such as reinforcement learning and transfer learning to enhance data manipulation and retrieval processes.

WorkFusion Use cases:

Role : Data Scientist & Lead Consultant

Domain : Banking **Client Name** : USB

Model: Six Extraction model and three Classification model

Use case 1: Equipment Finance Refund Process

Develop scalable automation for a US bank's Finance refund process using WorkFusion, handling multi-level approvals and integrating three web applications to enhance efficiency. Incorporate cognitive capabilities like check copy **extraction model**, intelligent exception handling, detailed logging, and report generation for audit trails. Aim to streamline processes, improve accuracy, and optimize performance of the refund automation system.

Use case 2: WMIS-Intelligent Document Processing

Automate document comparison process for Wealth Management using ML models. Validate data changes and integrate with Arcaria payment system. One ML payment-classification model, **4 custom extraction models**, legal term preservation, efficient payment entry creation, enhanced workflow efficiency.

Use case 3: Reinvestment

Implemented an automated solution for CD-IRA reinvestment transaction processing by integrating the Leap application and mainframe activities, and adding the upload addendum feature on Filenet. The project involved utilizing web-based and mainframe applications for data collection and processing, with users manually processing account data daily and generating two PDF forms upon successful completion. Automation was achieved through the ODF2 framework of WorkFusion, following coding standards and the Page-Object Model approach. A manual queue was set up for exceptions during execution, allowing business users to review and resolve issues promptly.

Use case 4: Middle Office Loan Closing

Created automated solution for extracting business value from trade alerts from Vendor Application for a leading US bank. Automated email reading and organization, extracting key trade information from emails for user decision-making. Bot identifies trades nearing SLA breaches and presents processed data effectively using WorkFusion's capabilities.

Responsibilities in Workfusion MLE:

- ➤ Lead the development of machine learning algorithms and models within WorkFusion's ODF2 framework, focusing on optimizing model performance and scalability.
- > Drive the implementation of data preprocessing techniques and feature engineering processes to enhance the quality of input data for machine learning models.
- > Guide the team in integrating machine learning solutions into Workfusion projects, overseeing model deployment and monitoring for efficiency and accuracy.

- Lead the evaluation and tuning of machine learning models, conducting thorough analysis to enhance model performance and align with business objectives.
- Provide technical leadership in exploring and implementing innovative machine learning techniques within the WorkFusion platform, driving automation innovation and efficiency.

Responsibilities in Data Science:

- ➤ Lead the customization of models and selection of algorithms, ensuring adherence to MRM (Model Risk Management) standards.
- ➤ Develop and implement advanced data analytics and machine learning solutions to provide actionable insights and support data-driven decision-making.
- ➤ Create predictive models and algorithms for complex data sets, utilizing statistical analysis and machine learning techniques aligned with MRM standards.
- Oversee data preprocessing, cleansing, and cross-validation processes to maintain data quality and integrity for accurate model training and analysis.
- > Provide technical guidance on data science tools and technologies selection, enabling efficient data processing and analysis in compliance with MRM standards.

Responsibilities in RPA:

- ➤ Lead the design and development of RPA solutions using WorkFusion's ODF2 framework, guiding the team in implementing efficient automation workflows.
- > Drive the adoption of best practices in RPA development, including utilizing the Page-Object Model (POM) structure for modular and reusable automation components.
- > Oversee the integration of custom machine learning models into RPA processes, optimizing decision-making and automation capabilities.
- ➤ Develop and implement advanced exception handling strategies in RPA workflows, ensuring robust error detection and recovery mechanisms for seamless operation.
- ➤ Lead the team in enhancing RPA processes with intelligent automation techniques, such as automated data processing and workflow optimization.

Role : Data Scientist & Senior Consultant

Domain : Banking

Client Name: Bank of America

Sub Modules: Common Extraction IE (Custom Hyper Model)

Model : 3 Extraction Model

Description : This AutoML SDK model will parsing through unstructured data and extracting essential information and structured data formats. The Hyper model trained & deployed in an actual banking environment and it has significantly reduced manual tagging time. The Documents processed less than 10 second. The fields required to complete each Service request transaction like Stop Payment, statement copy, backup request etc. This Model developed for extracting entities such as client name, bank account number.

Responsibilities:

- Worked closely with various teams across the banking system to identify right dataset like structured, semi-structured, and unstructured documents.
- ➤ Construed 400+ Service Request complex simulation datasets and Splitting as training and test set.
- ➤ Utilized machine learning techniques for outlier discovery & pattern search based on various data.
- ➤ Used Sensitivity analysis Pipeline configuration (V.10.2.X) for ParamGrid and changing different Python classifier algorithms, and built a model of box office performance.
- > Developed Streamlit dashboards for better visualization of the data, metrics derivation of insights easier.
- > Applied Auto-ML SDK components like annotator, Feature Extraction and Post processing.
- > Improved overall Model accuracy 85%
- Monitored and maintained high levels of data analytic quality, accuracy, and F1 score consistency.

Environment: AutoML SDK, Java, Python, Scikit learn

Role : Senior Consultant

Domain : Banking

Client Name: Bank of America

Sub Modules: Credit Assist and Document Assist

Model : 5 Classifications & 10 Extraction Model (Custom Hyper Model)

Description : The Email Assist process receives over 1 million emails annually from commercial clients. Each message must be categorized into types, and tasks required by each message must be correctly routed in order for client service to begin. The main focus of this process implementation is to make extensive use of WorkFusion Machine learning capabilities to classify the input emails which come in and further classification auto-extract the fields from the email body and send the extracted JSON back to the downstream systems.

Responsibilities:

- Analyze application behavior and implement enterprise automation and machine learning using WorkFusion Platforms.
- Actively collaborate with Workflow, data scientists part, data engineers, ML engineers, researchers, End-2-End, and Usecase Design to get things done.
- Analyze large amounts of Data/information to discover trends and patterns using Scikit-learn Python.
- Collaborated with multi-disciplinary product development teams to identify performance improvement opportunities and integrate trained models.
- ➤ Designed and Trained Classification &Information Extraction Model to Extract/Classify information from large scale dataset.
- ▶ Performance tuning for a high-performance HPO selection and Grid search with Version 10.2.X.
- Optimized personalization algorithms for Model and increased model performance with 20% F1 Score.
- Created post-processing rules to capture those invalid data and route those Document to the workspace to be tagged manually
- ➤ Applied Auto-ML SDK components like annotator, Feature Extraction and Post processing.
- ➤ Due to the varying nature of the email contents, it was difficult for the model to classify them correctly.
- > Retraining the model with new types of emails and large dataset reduced the errors.
- > Requirements analysis and translation to technical specifications using Performance Metrics Tool.
- > Interact with customer and participate in business and system requirements sessions
- > Requirement gap analysis and transforming the functional specs into technical specs
- > Responsible for delivering the project as per customer requirements within the given time period
- > Creating Knowledge management repository to share between team members.

Environment: WorkFusion ODF, Java, ML-SDK, Exchange Web Service (EWS), OCR, Python, Junit

Role : Senior Associate

Domain : Insurance Client Name : CHUBB

Sub Module: Global Sanctions, Claims Vision and FNOL Acord Form Auto/Property

Model : 1 Classification & 2 Extraction Model

Description <u>:</u> Global sanctions process involves name matching for individuals, organization or vessel names to identify potential match or false positive. Process automation will be limited to level 1 clearance only. Claims process (payments & reserves) involves making expense & indemnity payments & expense & loss reserves towards various property related claims. Generally clearance and claims process need many man power to complete the process. Here we have developed a robot using Java and WorkFusion intelligent automation tool to reduce man power and also increase efficiency.

Responsibilities:

- > Created Functional Requirements Documents (FRDs) for a Robotic business process, based on business process design discussions with business stakeholders.
- Analyze application behavior and implement enterprise automation and machine learning using WorkFusion Platforms.

- Actively collaborate with Workflow design, data scientists, data engineers, ML engineers, researchers. End-2-End, and Usecase Design to get things done.
- Conceptualized, designed and developed the Robotic process automation projects using Workfusion Studio.
- ➤ Preparing the SDD/ Workflow diagrams docs about the automation process.
- > Created a WF Human Task and tag the fields
- > Create the WF Training set using the 6000+ Historical Training set provided by customer.
- Responsible Model creation when the "Automation Available" label is displayed.
- > distance metric, the **Jaro-Winkler** distance and Rule set
- Created custom model for Post processing and Feature extraction
- Responsible for improve accuracy percentage.
- Created post-processing rules to capture those invalid data and route those Document to the workspace to be tagged manually
- > Applied Auto-ML SDK components like annotator, Feature Extraction and Post processing.
- Ensured fabricated bots met all workfusion standards.
- > Retraining the model with new types of emails and large dataset **reduced the errors.**
- > Involved in code review of the team members and implemented best practices.
- Responsible for delivering the project as per customer requirements within the given time period.

Environment: WorkFusion, Java, ML-SDK, RPA, Exchange Web Service (EWS), OCR

Role : Associate
Domain : Insurance
Client Name : CHUBB

Project : Workers compensation system(WCS)- RPA

Description: Businesses automation process, TO validation process and policy of Construction Practice - New Business and Renewal & Construction Wrap) leveraging Bot to reduce / eliminate manual effort as much as possible. This process help to reviewed and updated in a faster way with less manual intervention. Bot extracted information form PII and three supporting PDF's file and feed data into WCS application

Responsibilities:

- Designed and developed RPA Bot task.
- Developed the connectors between the bot with several legacy applications via interrogating the elements in the web and desktop applications, scraping data from shared folder PDF files and presenting them in a User Interface for the agents to process the compensation request quickly.
- > Created workflows as per the process maps, technical design documents and test cases for UAT to ensure a seamless delivery of the quality process.
- Introduced Selenium POM to reducing code duplication and improves test case maintenance.
- > POM Makes the code reusable (object repository is independent of test cases).
- ➤ If any information was missing from the dataset, bot used to get stopped until it gets manually updated
- Added logic to handle these exceptions so that bot can process the next line items and sent an email to the SME with the exception order number for the additional steps.
- ➤ Introduced CI methodology to ensure the continual delivery of the processes and better integration to provide a quality process.
- ➤ Monitored the performance of web clients using Scheduler Robotic Bot-task to ensure WCS web applications' smooth functioning.
- Implemented a solution for post-implementation exception handling for the production support team
- Responsible for the regular production support activities as well as the enhancement related tasks...
- Responsible for all aspects of architecture for applications and projects for an organization Includes architecture strategy, data technology, re-use, components, etc.

Environment: WorkFusion -RPA, Java, Jsoup, Selenium POM, Shared Folder, Adobe acrobat reader

Full stack development Projects

Role : Associate

Title : AIG CIP Conversion

Domain : Insurance

Client Name: American International Group

LOB : Auto, Home, Earthquake, Flood

Environment: Java/J2EE ,Spring Batch, Hibernate,JAXB,XSLT, Oracle and Log4i

Description: The conversion hub ("Conversion Hub") to provide functionality where at each PCG policy renewal the data associated with the customer, account, policy and sub-policy, billing, inspections and document metadata in Customer's current systems is automatically converted to formats that can be accepted by CIP and the converted data is then automatically transferred electronically to CIP (the "On Renewal Conversion"). Various data elements are housed and maintained out of different systems are

- 1. ePCG which is a hub for AIG Private Client Group's account management, quote and policy servicing
- 2. Wheatley Insurance Systems ("WINS") which is a system used to rate, quote, issue, bill and process claims for Auto, Homeowners, Collections and Excess liability and Earthquake policies
- 3. RADIUS which is a Home inspection order application which is integrated with both ePCG and ePremier Underwriting Systems ("UW"). The UW systems initiate inspection requests which are sent to Radius through a web service

Responsibilities:

- Developed supporting JAVA classes that controlled the whole flow of the module as per specifications.
- Developed the middletier using Session Bean, Entity Bean / DAO and Business Objects.
- Resolving technical and functional issues on a daily basis.
- ➤ Used Toad and Oracle9i Sql prompt to interact with the database.
- ➤ Used SVN for version control.
- > Involved in code review of the team members and implemented best practices.
- ➤ Check Variance Report and transmission logic

Role : Senior software engineer
Title : DTCWS and DTCADMIN

Client : Royal Sundaram General Insurance

Domain : Insurance

LOBs : Motor, health and Travel Insurance
Agents : PolicyBazaar,SCB,SBI,DBS Bank,CITI Bank

Environment: Java/J2EE, Hibernate, Spring, Web Services (REST), Tomcat, Liferay, XSLT Oracle

and Log4j

Description: DTCWS is an insurance domain project, which deals with the entire Health, Travel, Home Shield and Motor Insurance. It supports different Life Annuity policies. It deals with much functionality like Application, Contract, Underwriting, Agent/Broker, Renewals, Transactions, claims, Billing, Schedule, Relationships, Contract Information, Customer Information. This provides services to register the user, generating the Quote, Save the Quote and Purchasing the Policy and Proving the history of all transactions to a particular customer. Apart from this customer can view/edit the account details after authentication and authorization of customer and Adding new policies into the System. Admin services to register the Agent's, Offlineswipe, cheque-payment, generating the Reports,PDF, Agent authentication,customer tracking.

Responsibilities:

- > Creating technical specifications from analyzing functional specifications
- ➤ Used SOAP and REST based WebServices to develop Services.
- ➤ Used Spring (SpringJdbc) framework to interact with Database.
- ➤ Interacted with Clients to gather business requirements and generated requirement specification documents.
- Used SVN for version control.
- Leading the project team, specified design and coding standards.
- > Developed the middletier using Session Bean, Entity Bean / DAO and Business Objects.
- > Used AJAX for dynamic data fetch.

- Involved in code review of the team members and implemented best practices.
- ➤ Used Toad and Oracle Sql Prompt to interact with the database.
- > Involved in development of Search Screen Module which is extensively used by application.
- ➤ Involved in coding ,Report generation and Bug fixing.
- ➤ Involved In **X-Gen** and Reports Generation.
- ➤ Worked on call for production support.

Role : Software Engineer
Title : Find My Citi

Client : Citibank

Environment : Java/J2EE,GoogleMap3,JSP,Servlet,Ajax,XML, Webservice,My SQL,Jquery,CSS3.

Duration: March 2012 to August 2012

Description: Locate a Citibank ATM or Branch anywhere in the world. The domain owner summarizes the content as ATM Locator, Branch Locator, Citibank ATM, Citibank Branch, Asia Pacific, Australia, Citi ATM, Citi Branch, Citigold Center, Citigold Centre, China, Hong Kong, India, Indonesia, Korea, Philippines, Malaysia, Singapore, Taiwan, Thailland, Find Citi, Findmyciti, Find My Citi,citifinancial. To categorize this website features are Traffic view, Search along route, Satellite view, Street View, parameter input size for forms, avoid toll for directions, Virtual refresh for new design Google Maps, Google Maps API Web Services and Changed geocoding from version 2 to version 3. We have implemented & maintaining 25 countries. **Responsibilities:**

- ➤ Writing service to fetch and manipulate data from the database.
- ➤ Built on comprehensive map data, delivering end users a seamless ATM & Branch map experience.
- be developed a system that will display the status of a particular ATM.
- ➤ Dataset capture ATM centers location using longitude and latitude.
- > Access markers from Google Maps API and Restful Web Services.
- > Involved in coding and Bug fixing.
- ➤ Developing JSP pages for various modules like new Region language pages Admin, Edit/View etc.
- > Involved In Excel and Reports Generation.

Personal Details:

Fathers' Name : Govindraj T
Date of Birth : April 07 1989
Languages known : English, Tamil
Marital status : Married
Nationality : Indian

Declaration:

I hereby affirm that the information provided by me is accurate and true to the best of my knowledge.

PLACE:

DATE: (G SUDHAKAR)