

SUMMARY

Senior Full Stack Developer with 15+ years of experience delivering high-performance web applications and scalable digital platforms. Expert in React, Next.js, Java (Spring Boot), and AI integrations (OpenAI, Hugging Face). Proven leader in cross-functional teams, Agile methodologies, and DevOps practices. Specialized in architecting customer-centric solutions using modern frontend/backend technologies, microservices, CMS (Contentful, AEM), and cloud infrastructure (Azure, Kubernetes).

PROFESSIONAL SKILLS

- React JS
- Tailwind CSS
- LLM (Ollama, OpenAI)
- ReactFlow
- Langgraph
- NLP
- Figma
- Selenium
- AEM
- Agile
- Azure
- Rest Assured Framework
- Docker
- Numpy
- Maven
- Grafana
- Terraform
- Zustand
- Spring MVC
- SendGrid
- Junit
- Fast API
- Langchain
- Huggingface Transformers
- Python
- Cucumber/Playwright
- React testing Library
- Spring Boot
- Next JS
- Mono-repo
- Django REST APIs
- Prompt Engineering
- OpenAI Whisper
- Material UI
- Jest
- Typescript
- Contentful CMS
- GraphQL

WORK EXPERIENCE

Senior Full Stack Developer

SSE Airtricity

Jan 2024 - May 2025

Reading, UK

- Designed and deployed an enterprise-grade AI assistant platform transforming customer operations through voice/chat-based interfaces powered by LLMs and RAG.
- Tech Stack: React, FastAPI, Python, LangChain, LangGraph, OpenAI (GPT-4, Whisper), Ollama, Pinecone, Hugging Face Transformers, ChromaDB, Azure Kubernetes Service (AKS), Grafana
- Designed and deployed an enterprise-grade AI assistant platform transforming customer operations through voice/chat-based interfaces powered by LLMs and RAG.
- Architected a scalable AI platform hosted on AKS, integrating GPT-4 and Ollama LLMs with LangGraph multi-agent workflows.
- Developed visual AI workflow builders using React Flow and LangGraph, enabling non-developers to author complex conversations.
- Integrated Whisper for speech-to-text and Web Speech API, NLP(Natural Language Processing) for browser-based voice interactions.
- Enabled RAG via Pinecone/ChromaDB, referencing billing guides, energy policies, and FAQs for real-time context-aware responses.
- Implemented human-in-the-loop fallback using LangGraph state transitions.
- Visualized assistant performance with Grafana (intent accuracy, fallback rate, latency).
- Supported multilingual interactions and domain-specific prompt tuning to improve accessibility and usability across customer segments.
- Orchestrated secure API gateways and tokenized data flows for GDPR-compliant PII handling and conversational logging.

Senior Full Stack Developer

SSE Airtricity

Feb 2023 - Jan 2024

Dublin, Ireland

- Tech Stack: Python, Scikit-learn, LightGBM, Streamlit, FastAPI, LangChain Agents, Azure Cognitive Services, PowerBI Embedded, OpenAI Function Calling, Databricks
- Developed an AI-based energy optimization tool helping customers save costs and reduce carbon footprint via personalized insights.
- Built ML pipelines to forecast energy usage using weather, occupancy, and seasonal data.
- Created LangChain agents that generated user-facing explanations and actionable tips.
- Integrated with Azure Form Recognizer to extract structured data from uploaded utility bills.
- Leveraged OpenAI Function Calling to dynamically trigger plan comparisons and simulations.
- Delivered interactive dashboards (Streamlit, PowerBI) with embedded voice feedback and TTS.
- Enabled end-users to simulate energy savings and green plan transitions visually.
- Integrated real-time usage APIs to deliver proactive alerts for unusual energy consumption.
- Employed clustering algorithms for customer segmentation and delivered targeted energy-saving nudges.
- Built explainable AI (XAI) modules to show how recommendations were derived, improving transparency and trust.
- Conducted A/B testing on AI nudges vs. static tips, resulting in higher conversion to cost-saving actions.
- Impact:
- Reduced support call volume by 35%
- Helped 18,000+ users save an average of £110/year.
- Boosted green tariff adoption by 22%.
- Increased customer engagement with the portal by 47%. Improved user satisfaction scores (CSAT) by 20% due to interactive, personalized guidance.

Senior Full Stack Developer

SSE Plc

Apr 2021 - Feb 2023

Reading, UK

- Engineered modular content components using Contentful CMS with TypeScript, GraphQL, and REST APIs for efficient content delivery and management.
- Developed dynamic and performant web applications with Next.js, utilizing SSR, ISR, and SSG for SEO optimization and page performance.
- Collaborated with content editors to design reusable content models and automated content migrations across environments.
- Built and maintained Azure DevOps pipelines for CI/CD across multiple environments.
- Configured Azure API Management, firewall protection for DDoS prevention, and custom Grafana dashboards for A/B test metrics (CTR, conversion, bounce).
- Managed and monitored Azure dashboards tailored to team-specific analytics needs.
- Architected Next.js as a middleware layer to streamline data flow between frontend and backend services.
- Integrated Optimizely for A/B testing in React/Next.js applications, reducing test development time by 30% through reusable testing modules.
- Developed microservices and REST APIs using Java 8 and Spring Boot, applying domain-driven design and secure endpoint development with Spring Security.
- Built a scalable API test automation framework using REST Assured, Java Streams, Lambdas, and Optional for clean, maintainable code.
- Created responsive, scalable UI components using React.js, TailwindCSS, and documented them with Storybook for team-wide reuse.
- Implemented state management with Zustand, ensuring optimized and lightweight React application performance.
- Translated Figma UI designs into production-ready interfaces following mobile-first and responsive design principles.
- Integrated SendGrid for transactional and marketing email flows.
- Automated testing suites using Selenium, Playwright, Cucumber, and Gherkin for functional and regression test coverage.
- Conducted detailed code reviews to ensure high-quality, maintainable code and adherence to best practices.
- Worked in Agile environments with cross-functional teams to deliver scalable features and enhancements.

Lead Java Developer

Ordnance Survey

Sep 2019 - Apr 2021

England, UK

- OMSE is a system to open up Ordnance Surveys world class data.
- Expected Outcomes: Fully open significantly more geospatial data for businesses and developers to use free and without restriction.
- Enable start-ups to deliver new products and services with the data using the free threshold.
- Make the data available for free, up to a threshold. Some businesses will not need to pay at all for their use of OS data because of the use of the free threshold.
- Help make new innovations possible in the housing market. For example, this data will make it easier for property developers to identify potential development sites which aren't currently registered.
- Help new users identify the pricing structure for the data more easily following the OS changes, removing uncertainty around cost of use.
- Implement an improved errors and omissions tool and reporting process.
- Publish data in additional formats will also improve the quality of the data and its ease of use.

Principal Engineer*Sapient***Jun 2016 - Sep 2019***England, UK*

- The Pace project is a Nissan Digital Platform to create 330 websites across the globe for both brands and their sub- brands like (Datsun, Infiniti) as well. So, the objective of this project is to create a single' best in class' global digital platform for all brands in the Renault-Nissan alliance and deploy to every brand's region and markets.
- Used new technologies for integration like Apigee to trace the web service response from Nissan endpoints.
- Development of AEM components & Configuration Management of the source code.
- Involved in migration of AEM6.1 to AEM6.4. Leading team in UK and India. Created components (Stateful, Stateless) in ReactJS using ES6 syntax.
- Used best practices in ReactJS using Hooks, state, Redux. Used module bundler tool Webpack and Babel as a JavaScript compiler.
- Worked with workflows and DAM and CQ bundles. Used Grafana to monitor website performance using AB testing.
- Used Splunk to check error logs. Working with users to establish requirements and determine priorities.
- Developing new applications, components & functionality to existing systems. Leading team in India and London.
- Involved in accurately providing estimated development times.
- Investigating alternate configurations & implementing better solutions. Developed Junit Test cases using TDD approach.
- Requirements gathering and Impact analysis of the enhancement requests through user stories.
- Used apigee as a tool to call/trace request/response from web service.

Full Stack Developer*Sophos Ltd***Feb 2016 - Jun 2016***England, UK*

- Sophos Cloud Server Protection effectively protects your server environment from malicious attacks while keeping your servers running at peak performance. Designed to secure mission critical servers, Sophos Cloud Server Protection integrates server application whitelisting and lockdown with advanced anti-malware and HIPS. And, it's effortless to deploy, manage, and maintain. Sophos Cloud is the only solution that achieves lockdown with a single click, securing your servers in a safe state. With the integration of advanced anti-malware technology, when a user clicks lockdown, Sophos Cloud automatically scans the system and establishes an inventory and whitelists applications. It then locks the connections between applications and associated files such as dll, data files, and scripts. During the lockdown process, Sophos automatically creates trusted change rules to ensure only trusted sources or processes can update the whitelisted applications.
- Development of Java interfaces & Configuration Management of the source code.
- Working with users to establish requirements and determine priorities.
- Worked with Amazon web services. Involved in accurately providing estimated development times.
- Worked with AngularJs to create SPA for Cloud Server. Automation testing on endpoint systems using vmware.
- Developed Cloud Server App using best practices of AngularJS MVVM.
- Investigating alternate configurations & implementing better solutions.
- Developed Endpoint Test cases using TDD approach with Groovy.
- Requirements gathering and Impact analysis of the enhancement requests through user stories

Java/AEM Developer*Digitas***Jul 2015 - Feb 2016***England, UK*

- The Helios project is a Nissan/Renault alliance to create 330 websites across the globe for both brands and their sub- brands like (Dacia, Datsun, Infiniti) as well. So, the objective of this project is to create a single' best in class' global digital platform for all brands in the Renault-Nissan alliance and deploy to every brand's region and markets. Used new technologies for integration like Apigee to trace the web service response from Renault/Nissan endpoints.
- Development of AEM components & Configuration Management of the source code. 4
- Worked with workflows and DAM and CQ bundles.
- Working with users to establish requirements and determine priorities.
- Worked with Amazon web services and Integration of mulesoft with AEM.
- Developing new applications, components & functionality to existing systems.
- Involved in accurately providing estimated development times.
- Investigating alternate configurations & implementing better solutions. Integration between Apigee and Renault end point systems
- Developed Junit Test cases using TDD approach.
- Requirements gathering and Impact analysis of the enhancement requests through user stories.
- Used apigee as a tool to call/trace request/response from web service. Integration of Renault/Nissan end systems with Helios. Working with sling mappings and vhosts of various markets globally

Java/J2EE Developer*Connect Group***May 2014 - Jul 2015***England, UK*

- The Jaguar Land Rover calculator is the tool developed by the Connect Group. It helps the user to calculate the vehicle price according to the finance product available for the particular country, Finance Calculator allows user to switch between the products

any time while using it. User can also compare the different products at once. Finance Calculator includes three products

- PCP, Leasing and Hire Purchase. All the finance calculations are done at the back end according to the rules set by finance providers. Finance Calculator is currently live in Europe market including UK, France, Spain, Italy and Germany.
- Development of Java interfaces & Configuration Management of the source code. Working with users to establish requirements and determine priorities.
- Meeting client's face to face at the office.
- Developing new applications, components & functionality to existing systems.
- Involved in accurately providing estimated development times.
- Investigating alternate configurations & implementing better solutions.
- Developed the integration between Maven and Java using JAX-B.
- Developed JUnit Test cases using TDD approach.
- Implemented Spring MVC3 using to handle and mapped the incoming requests to the appropriate controller.
- Used Tridion for the front end development used for creating components.
- Working with DAM and workflows.
- Liaising with the Testing Team to work in a collaborative manner.
- Tuned and optimised performance of the application (end-to-end) which has given the end users a better user experience and has saved time and cost.
- Scrum meetings and daily burn down and participating in Sprint planning and creation of Product backlog. Used Jenkins as a deployment tool

Java/J2EE Developer

Sep 2013 - May 2014

Connect Group

England, UK

- The Jaguar Land Rover configurator is the tool developed by the Connect Group. It helps the user to customise the car according to the user's requirements. It helps user to select colour, wheels, hood, interiors and many more options on the configurator. Users can see the actual look and feel of the car after configuration. It also helps users to display the cost of the car according to the selection.
- Development using the effective application programming language tools using Design Patterns wherever possible.
- Developed the integration between Maven and Java using JAX-B.
- Developed JUnit Test cases using TDD approach.
- Database designing and writing DAO code to persist data and for CRUD operations.
- Implemented Spring MVC3 using to handle and mapped the incoming requests to the appropriate controller.
- Use Tridion CMS as the database to fetch the data to and from the database.
- Liaising with the Testing Team to work in a collaborative manner.
- Scrum meetings and daily burn down and participating in Sprint planning and creation of Product backlog Used Jenkins as a deployment tool.

Technical Associate

Jan 2012 - Sep 2013

Tech Mahindra

India, India

- ADEPT is an internal tool used by AT&T. It's a comprehensive design and deployment strategy and architecture for the IT infrastructure and a way to automate the process of it. It's also an infrastructure driven approach to improve IT infrastructure deliveries.
- Requirements gathering and Impact analysis of the enhancement requests through user stories. Also, create and update detailed
- High-Level Design and use cases as part of the initial analysis.
- JUnit test cases with Test First (TDD) approach.
- Backend development on enhancement requests which was part of maintenance and support activity using the already used programming technologies, Spring MVC, IOC, Hibernate.
- Front end development done using Angular js, jQuery UI, jQuery, HTML5.
- Testing the application using JUnit and JMock following TDD approach.
- Source control with Subversion and continuous integration with Maven and Hudson.
- Tuned and optimised performance of the application (end-to-end) which has given the end users a better user experience and has saved time and cost.
- Used Adobe CQ5.6 CMS to build html/css/javascript templates to design GUI screens and design of modular and extensible CQ WCM components and services to suit the CQ requirements.
- Extract a part of the functionality of the ADEPT and develop a new tool separately to focus a piece of the job which was earlier not related to the main tool. The technologies used were Adobe CQ5. This has given users a faster experience, which has saved their time and eventually saves on budget.
- Scrum meetings and daily burn down and participating in Sprint planning and creation of Product backlog. ADEPT is an internal tool used by AT&T.

Software Engineer

Feb 2011 - Dec 2011

BirlaSoft

India, India

- Digital Experience is one of the biggest financial conglomerates with interest in a wide range of brokerage, mutual fund, banking and consumer financial products and services on an integrated basis. The organisation leverages its business with prudent investments in cutting edge technologies. The main objective of this project is to design and Implement an Enterprise level
- ContentManagementArchitecture. The Architecture should incorporate the need to use Interwoven as the Content Management tool for all its worldwide websites.
- Planned test schedules/strategies aligning with project scope or delivery dates.
- Interacted with clients in various forums to discuss project status, clarifying any functionality-related queries.
- Developed software applications per user specifications.
- Modified and debugged developed software to meet user and quality requirements.
- Monitored bug resolution efforts, tracking successes and creating/maintaining known test defect databases.
- Responsible for the system architecture and implementation.
- Involved in the designing of contracts and schema.

Associate Software Engineer

Nuron Softwares Pvt Ltd

Jan 2009 - Jul 2009

Ludhiana, Punjab

- Nuron Enterprise Resource Planning (ERP) is the technology to manage your operations end to end. With lean manufacturing capabilities of ERP solution, it will minimize waste and increase quality and productivity. Employees and managers with appropriate rights will have up-to-the-minute insight into the company's monthly turnover, cash flows, and accounts receivable outstanding etc.
- Nuron ERP permits the instant traceability of all transactions; you can get right to the source document with just a few clicks. This
- degree of accurate information and insight allows you make decisions based on reality, not guesswork, optimizing the quality of decision making.
- Preparation of technical design document from the business requirements.
- Involved in the designing of contracts and schema.
- Involved in development of presentation tier using Java.
- Involved in resolution of common technical problems.
- Fixing and resolving bugs which are present in product.

EDUCATION

Master of Computer Applications: Computer Applications

Punjab Technical University, Jalandhar

Bachelor of Computer Applications: Computer Applications

Guru Nanak Dev University, Amritsar