# AMBUJ KUMAR TRIPATHI

**AI Prompt Engineer | LLM Integration Specialist | Model Validation Expert**

✓ **AVAILABLE IMMEDIATELY • Remote/Hybrid • Open to Relocation**

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Portfolio: https://ambuj123-lab.github.io/Ambuj_AI_Portfolio
GitHub: https://github.com/Ambuj123-lab

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## PROFESSIONAL SUMMARY

**AI Prompt Engineer** with production experience optimizing commercial-grade AI models at **Hogarth Worldwide (WPP)**. Specialized in prompt engineering, LLM integration, adversarial testing, and AI workflow automation. Successfully transitioned from telecom infrastructure (British Telecom, Tata Communications) to AI through intensive self-learning and hands-on project execution.

- **Reduced prompt iteration time by 40%** through systematic optimization methodology at Hogarth
- Built **8+ production-ready AI applications** (chatbots, analyzers, automation tools) with **10,000+ user interactions**
- Earned **18+ verified certifications** from Google Cloud, IBM, AWS, Microsoft Azure with practical implementations
- **5+ years technical experience** in automation, data analysis, network optimization, and cross-functional team collaboration
- **NVIDIA** certified in RAG Agents & Edge AI. Specialized in building cost-efficient LLM workflows (Llama 3, Gemini) and automated prompt testing tools.

> **SEEKING: AI Engineer | Prompt Engineer | LLM Integration Engineer | AI/ML Roles | Immediate Joining Available**

**Core Strengths: Prompt Engineering • LLM API Integration • Model Validation • Red Teaming • Python/JavaScript • Cloud Platforms • Production AI Workflows • Data Analysis • Automation • Quality Assurance**

## CORE COMPETENCIES & TECHNICAL SKILLS

### AI & Prompt Engineering

Prompt Engineering • Large Language Models (GPT-4, Claude, Gemini, Meta Llama 3.70B, IBM WatsonX) • LLM API Integration • Adversarial Testing • Red Teaming • Model Validation • Model Robustness Testing • Few-Shot Learning • Zero-Shot Prompting • Token Optimization • Content Evaluation • Data Quality Assessment • Fact-Checking & Verification • Responsible AI • AI Ethics

### Programming Languages & Frameworks

Python • JavaScript (ES6+) • HTML5 • CSS3 • React 18 • Flask • Node.js • Gradio • Streamlit • Tailwind CSS • Babel

### AI Tools & Platforms

Hugging Face Transformers • OpenRouter API • Gemini API • Vertex AI • IBM WatsonX • Jupyter Notebooks • VS Code • NotebookLM – LLM-powered notebook for document analysis, context-driven search, and rapid experimentation • REST APIs • Puppeteer • Git

### Cloud Platforms

Google Cloud Platform (Vertex AI, Cloud Functions, Cloud Run, GKE) • IBM (WatsonX Services, Cloud Foundry, Speech to Text, Text to Speech) • Microsoft Azure AI • Netlify • Render.com • Hugging Face

### Specialized Skills

Progressive Web Apps (PWA) • Service Workers • Offline Functionality • Data Processing & Visualization (Papa Parse, SheetJS, Plotly.js) • Web Speech API • Web Audio API • CORS • Rate Limiting • Environment Secrets Management • PDF.js • html2canvas • jsPDF

## Additional Technical Skills

Data Analysis • Automation • Network Optimization • GIS Tools • Fiber Optic Network Design • Excel Advanced Functions • Business Process Documentation • Performance Monitoring • Quality Assurance • Cross-functional Collaboration • Technical Documentation

# PROFESSIONAL EXPERIENCE

### AI Prompt Engineer

**Hogarth Worldwide** (WPP Marketing Communications India Pvt. Ltd. via TeamLease)

September 2025 – October 2025 | Remote, India | 6-Month Contract (Concluded due to mandatory office relocation requirement - health reasons)

- Engineered and optimized prompts for **commercial-grade generative AI models** (Flux, SDXL) within strict technical constraints (72-77 token limits across Base, Positive, Negative prompts) for brand-compliant visual outputs
- Conducted **systematic model validation and adversarial testing**, identifying critical limitations including instruction adherence failures, hallucination patterns, layout inconsistencies, and edge-case behaviors across multiple parameters
- Built **reusable prompt libraries** and comprehensive documentation for **25+ use case categories**, enabling team scalability and reducing prompt engineering time by **40%**
- Collaborated with cross-functional teams to define AI integration protocols and quality assurance standards for production pipelines
- Developed prompt refinement methodology translating subjective business feedback into quantifiable technical adjustments (lighting keywords, texture emphasis, composition weighting, color saturation parameters)

> **KEY ACHIEVEMENT:** Created systematic prompt optimization framework reducing iteration cycles and improving output quality consistency across diverse creative requirements

*Technologies: Flux, SDXL, Prompt Engineering, Adversarial Testing, Model Validation, QA Protocols*

### Associate Engineer - Fibre & Network Delivery

**British Telecom Global Services Pvt. Ltd.** | January 2022 – August 2024 | Gurugram, India

- Led **FTTP network planning** using GIS tools (PipeR, Amanda, NGWFMT), reducing deployment time by **15%** through systematic optimization and data-driven decision making
- Coordinated cross-functional teams across technical and business units, achieving **98% quality assurance compliance** with streamlined processes and clear documentation
- Awarded **"Top Performer" (January 2022)** for innovative problem-solving and process improvement initiatives that enhanced team productivity
- Developed **rule-based automation systems** for generating network estimates and project proposals, reducing manual effort by **70%** and improving accuracy
- Built and managed structured datasets from historical project data (costs, materials, designs) to train automated estimation models
- Applied continuous model evaluation and iteratively refined automation logic based on user feedback and performance metrics
- Mentored 5+ junior engineers on technical processes and quality standards; skills later applied to AI model tuning and validation workflows

*Skills Applied: Data Analysis, Automation, GIS Tools, Network Optimization, Cross-functional Collaboration, Process Optimization, Quality Assurance*

### Operations & Maintenance Engineer

**Tata Communications Transformation Services Ltd.** | November 2021 – January 2022 | Lucknow, India

- Optimized network performance and monitoring systems, reducing downtime by **10%** through comprehensive data analysis and proactive maintenance
- Managed billing systems for OSP/ISP services with **100% accuracy** using systematic quality control processes and validation checks
- Improved Field Engineer SLA compliance, achieving **98% TAT (Turnaround Time)** through workflow optimization and resource coordination

*Tools: ServiceNow, Orion, Network Monitoring Systems, Excel Advanced Functions*

### Optical Fiber Execution Engineer

**Annu Infra Construct India Pvt. Ltd.** | December 2017 – June 2018 | Kolkata, India

- Executed fiber optic deployment projects for **Ministry of Defense** across 3 states ensuring complete security compliance and technical standards
- Ensured **100% compliance** with security protocols and technical specifications through rigorous quality assurance and documentation
- Reduced project delays by **20%** through effective vendor coordination, strategic resource optimization, and proactive issue resolution

### System Administrator

**Tata Consultancy Services (TCS)** | October 2013 – November 2014 | Noida, India

- Managed revenue systems for **Delhi Jal Board**, ensuring **99% uptime** through proactive monitoring, maintenance, and incident management
- Trained **20+ portal users** on system optimization and best practices, improving overall operational efficiency and user satisfaction
- Supported eMigrate portal (Ministry of Overseas Affairs) with document verification processes and automated workflow enhancements

## KEY AI PROJECTS (ALL LIVE & ACCESSIBLE)

### Geo AI - Geospatial Narrative & Image Analysis Tool | November 2025

- Developed an AI-powered geospatial analysis tool using **Gemini 1.5 Flash** to generate location-based narratives from map images.
- Implemented interactive map rendering with **Leaflet.js**, allowing users to capture specific regions or **upload custom images** for detailed AI analysis.
- Integrated secure image handling and API token management for seamless AI analysis requests.
- Deployed on **Render** with automated CI/CD pipelines from GitHub for continuous delivery.
- **Live Demo:** https://geo-narrator-ai.onrender.com/

*Technologies: Node.js, Express, Gemini API, Leaflet.js, HTML5, CSS3, Render*

### LLM-Integrated Resume Chatbot | Meta Llama 3.3.70B | August 2025

- Developed scalable chatbot using Llama 3.3.70B, reducing query resolution time by **25%** for **100+ concurrent users**
- Designed **stateless architecture** with client-side state management, storing chat history in JavaScript array on user's browser, eliminating server-side session storage and database dependencies
- Implemented front-end to send entire chat history as JSON in each request, enabling server to process full context without database lookups, enhancing scalability and reducing server load
- Integrated secure OpenRouter API with rate limiting and CORS configuration for robust performance and security
- Built responsive frontend for seamless real-time interactions across devices
- **Live Demo:** https://ambuj-resume-bot.onrender.com

*Technologies: Meta Llama 3.3.70B, OpenRouter API, Python, Flask, JavaScript, HTML5, CSS3, CORS, Render.com*

**Professional Task Management System | Privacy-First PWA | September 2025**

- Architected **privacy-first design** using 100% client-side localStorage with JSON export/import functionality, supporting **100+ tasks** without performance degradation
- Implemented installable Progressive Web App with service workers achieving **99% offline functionality** and cross-platform compatibility with **95% user retention** rate during testing
- Integrated dual audio system using Web Speech API and Web Audio API for task feedback and notifications, reducing user onboarding time by **20%**
- Developed real-time session time tracking with activity detection (mousemove, keypress, visibility events), displaying formatted time with **98% accuracy**
- Built advanced multi-field search across task ID, title, notes, category, priority, and status, improving task retrieval speed by **30%**
- Designed custom AMBUJ-prefixed ID generation system (AMBUJ001 format) with persistent localStorage counter, ensuring **100% unique identification** across 500+ entries
- Created comprehensive filtering system with 7 categories (all, todo, WIP, completed, work, personal, high priority), increasing organization efficiency by **40%**

*Technologies: React 18 (Hooks), Tailwind CSS, PWA, Service Workers, Web Audio API, Web Speech API, LocalStorage, Responsive Design, Babel*

**Resume Intelligence - AI-Powered Resume Analyzer | August 2025**

- Built comprehensive web-based resume analysis platform using AI algorithms for resume evaluation and job description matching
- Integrated PDF.js for client-side PDF text extraction, processing multi-page documents with **95% accuracy**
- Developed multi-dimensional scoring system (Resume Score 0-100, JD Match %, ATS Compatibility, Potential Score) using custom algorithms
- Implemented intelligent keyword matching with stop-word filtering and quantified achievement detection using regex patterns
- Designed responsive Firebase-inspired UI with dark/light theme toggle, smooth animations, and drag-drop file upload functionality

*Technologies: HTML5, CSS3, JavaScript ES6+, PDF.js, PWA, Service Workers, Font Awesome, Responsive Design*

**Smart AI Prompt Builder - Intelligent Prompt Generation Tool | August 2025**

- Developed intelligent web application helping non-technical users create effective AI prompts and recommending optimal AI platforms for specific tasks
- Built advanced keyword matching algorithm automatically detecting **8 problem categories** (Technical, Research, Professional, Creative, Social Media, Learning, Analysis, General)
- Implemented smart AI tool recommendation engine suggesting best platforms (Perplexity, Claude, ChatGPT, Gemini, DeepSeek, Grok) based on user requirements
- Created bilingual interface (Hindi/English) with 6 customizable tone styles (Professional, Casual, Friendly, Informative, Creative, Technical)
- Designed zero data collection architecture with client-side processing ensuring complete user privacy and security
- Achieved **95% accuracy** in category detection through intelligent pattern recognition and contextual analysis

*Technologies: HTML5, CSS3, JavaScript ES6+, Client-Side Processing, Responsive Design, Netlify*

**Resume-as-Code - Automated Resume Builder Pipeline | July 2025**

- Built automated pipeline generating ATS-friendly PDF resumes from single HTML/CSS source file using headless browser technology
- Implemented Node.js backend with Puppeteer for programmatic HTML rendering and high-quality PDF export with pixel-perfect formatting
- Developed single-command automation ensuring consistency, eliminating manual formatting errors, and enabling version-controlled resume updates
- Achieved **100% formatting consistency** across multiple resume versions with automated build process reducing update time by **90%**

*Technologies: Node.js, Puppeteer, HTML5, CSS3, Headless Browser Automation, PDF Generation*

**Additional AI Projects**
- **Resume Chatbot (IBM WatsonX):** Created conversational AI chatbot with **95% intent recognition** for 50+ daily queries using advanced prompt engineering techniques. Deployed on Netlify with 99.9% uptime
- **Personal AI Assistant (Python, Gradio):** Built Python-based assistant handling **200+ daily queries** with intelligent response generation. Deployed on Hugging Face Spaces with public API access

**Complete Portfolio: https://ambuj123-lab.github.io/Ambuj_AI_Portfolio**
**(All projects with live demos, source code, and documentation)**

## INDUSTRY CERTIFICATIONS & PROFESSIONAL CREDENTIALS

### NVIDIA (Verified)
- Building RAG Agents with LLMs. Developed a Gradio-based chatbot in Jupyter, enabling document Q&A using LangChain and custom data embeddings.
- Hands-on RAG pipeline development, FAISS, LangChain, FastAPI
- Getting Started with AI on **Jetson Nano**. Implemented real-time image classification and regression models (CNNs, ResNet-18) on edge device using live camera input.

### Google Cloud Platform Skill Badges (Verified)
- Prompt Design in Vertex AI Skill Badge
- Build Real World AI Applications with Gemini and Imagen Skill Badge
- Explore Generative AI with Vertex AI Gemini API Skill Badge
- Build a Website on Google Cloud Skill Badge - Deployed and scaled full-stack website using Cloud Run, Compute Engine, Google Kubernetes Engine (GKE), migrated from monolithic to microservices architecture via Cloud Build
- Classify Images with TensorFlow on Google Cloud Skill Badge - Built, trained, and deployed image classification model using TensorFlow and Vertex AI Workbench for real-time prediction endpoints
- Develop GenAI Apps with Gemini and Streamlit Skill Badge - Built and deployed GenAI web apps using Gemini API, Streamlit, Docker, and Cloud Run

### IBM Artificial Intelligence (Verified)
- Artificial Intelligence Fundamentals
- Generative AI in Action
- Deep Learning Essentials
- Build Your Own Chatbot - Level 1
- Python for Data Science

### Microsoft Azure AI
- Get Started with Language Models in Azure Databricks
- Review Responsible AI Principles for Language Models

### Industry Job Simulations (Forage Platform - Verified)
- BCG X (Boston Consulting Group) - Data Extraction, Financial Analysis, Developing AI-powered Financial Chatbot (NLP)
- AWS Solutions Architecture Job Simulation
- PwC - Digital Assurance & Transparency Simulation
- Deloitte Australia - Data Analytics Completion Certificate
- Tata Group (Tata iQ) - GenAI Powered Data Analytics Job Simulation
- Datacom - Partnering with AI in the Workplace Job Simulation
- EAB - GenAI for Proposal Generation Completion
- Siemens - Forage Completion Program

### Additional Professional Recognition
- LFS118: Ethical Principles for Conversational AI - The Linux Foundation
- Anthropic Academy - Model Context Protocol (MCP) Course
- Anthropic Academy - Claude with Google Vertex AI

***Note:*** *All certifications are verifiable through official platforms. Verification links available in online portfolio.*

## ADDITIONAL QUALIFICATIONS & ACHIEVEMENTS

- **AI Content Creation:** Produced 50+ AI-generated YouTube Shorts, achieving 10,000+ views and demonstrating creative AI application skills

- **Open Source Contribution:** Beta-tested 3+ AI tools, providing actionable feedback to developers and contributing to product improvement
- **Continuous Learning:** Qualified for BITSOM x Masai Product Management with Generative AI Program (2025)
- **Self-Learning Journey:** Mastered AI/ML curriculum through comprehensive online resources including Coursera, YouTube, Hugging Face, and hands-on project implementations

## EDUCATION

**Post Graduate Diploma in Power Transmission & Distribution**

National Power Training Institute, Ministry of Power | 2015 – 2016 | New Delhi, India

**Bachelor of Technology - Electrical & Electronics Engineering**

Uttar Pradesh Technical University | 2009 – 2013 | Lucknow, India

**Higher Secondary Education - Science Stream**

Sunshine School | Muzaffarpur, Bihar, India

**Secondary Education**

DAV Public School | Muzaffarpur, Bihar, India