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Portfolio

Ambuj Kumar Tripathi

AI Solutions Specialist | Prompt Engineering & Model
Validation Expert | Conversational & Generative AI
Developer

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Portfolio: https://ambuj123-lab.github.io/Ambuj_AI_Portfolio/
GitHub: <https://github.com/Ambuj123-lab>
Live Demo: <https://ambuj-resume-bot.onrender.com>

PROFESSIONAL SUMMARY

AI Solutions Specialist with production-level prompt engineering experience. Recently worked at Hogarth Worldwide (WPP) on enterprise brand campaigns, engineering prompts for commercial AI models (Flux, SDXL) and reducing prompt engineering time by 40%.

Leveraging 5+ years of technical problem-solving experience, successfully transitioned from telecom infrastructure to AI through self-learning and production implementations. Specializes in prompt engineering, adversarial testing, AI model validation, and translating business requirements into technical solutions. Proven ability to work with enterprise LLMs (Meta Llama, IBM WatsonX, GPT, Claude) and build scalable AI workflows across creative and technical domains.

TECHNICAL SKILLS

AI & Machine Learning

Prompt Engineering, Adversarial Prompting, Red Teaming AI Models, Model Robustness Testing, Content Evaluation, Data Quality Assessment, Fact-Checking & Verification, AI-Assisted Development, Large Language Models (GPT, Claude, Gemini, Meta Llama 3.70B, IBM WatsonX), Natural Language Processing, Sentiment Analysis, Generative AI, Conversational AI, Few-Shot Learning, Zero-Shot Prompting, AI Model Integration, Responsible AI, AI Ethics

Full-Stack Web Development

Frontend (HTML5, CSS3, JavaScript ES6+, Babel, Tailwind CSS, Responsive Design, Mobile-First Approach), Data Processing & Visualization (Papa Parse, SheetJS, Plotly.js, html2canvas, jsPDF), Backend (Node.js using Puppeteer, Restful API, API Integration)

Progressive Web App Development

Service Workers, Web App Manifest, Offline Functionality, Caching Strategies, Cross-Platform Installation

Cloud Platforms

Google Cloud Platform (Vertex AI, Cloud Functions), IBM Cloud (Watson Services, Cloud Foundry, Speech to Text, Text to Speech), Netlify, Hugging Face Spaces, Render.com

Programming & Tools

Python for AI-Driven Development (Specialized in AI-assisted tools like GitHub Copilot, Claude), Hugging Face Transformers, Gradio, IBM Watson Assistant, Jupyter Notebooks, Git, VS Code, REST APIs, OpenRouter API, Gemini API

Telecom & Infrastructure

Fiber Optic Network Design, Network Performance Optimization, FTTP Planning, PipeR, Amanda, NGWFMT, ServiceNow, Orion, Vendor Coordination

Data & Operations

Excel Advanced Functions, Data Visualization, Business Process Documentation, Performance Monitoring, Google Analytics for user behavior tracking and website performance optimization

PROFESSIONAL EXPERIENCE

AI Model Validation & Prompt Engineering Specialist

Hogarth Worldwide (WPP Marketing Communications India Private Limited (via TeamLease) | Sept 2025 – Oct 2025 | Remote, India

- 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.
- Developed prompt refinement methodology translating subjective business feedback into quantifiable technical adjustments (lighting keywords, texture emphasis, composition weighting, color saturation parameters)
- Collaborated with cross-functional teams to define AI integration protocols and quality assurance standards for production pipelines
- Built reusable prompt libraries and comprehensive documentation for 25+ use case categories, enabling team scalability and reducing prompt engineering time by 40%

Associate Engineer - Fibre & Network Delivery

British Telecom Global Services Pvt. Ltd. | Jan 2022 – Aug 2024 | Gurugram, India

- Led FTTP network planning using GIS tools, reducing deployment time by 15% through systematic optimization
- Coordinated cross-functional teams, achieving 98% quality assurance compliance with streamlined processes
- Awarded "Top Performer" (Jan 2022) for innovative problem-solving and process improvement initiatives
- Mentored 5+ junior engineers; skills later applied to AI model tuning and validation workflows
- Utilized data analysis to optimize network performance and resource allocation for enhanced efficiency
- Developed rule-based automation systems for generating network estimates and project proposals, reducing manual effort by 70%
- 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

Operations & Maintenance Engineer

Tata Communications Transformation Services Ltd. | Nov 2021 – Jan 2022 | Lucknow, India

- Optimized network performance, reducing downtime by 10% via comprehensive data analysis and monitoring
- Managed billing for OSP/ISP services with 100% accuracy using systematic quality control processes
- Improved Field Engineer SLA, achieving 98% TAT compliance through workflow optimization

Optical Fiber Execution Engineer

Annu Infra Construct India Pvt. Ltd. | Dec 2017 – Jun 2018 | Kolkata, India

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

System Administrator

Tata Consultancy Services (TCS) | Oct 2013 – Nov 2014 | Noida, India

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

KEY AI PROJECTS

LLM-Integrated Chatbot | Meta Llama 3.3.70B

Aug 2025

- Developed scalable chatbot using Llama 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
- Implemented front-end to send entire chatHistory 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 for robust performance
- Built responsive frontend for seamless real-time interactions across devices

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

Professional Task Management System | Privacy-First PWA

Sept 2025

- Architected privacy-first design using 100% client-side localStorage with JSON export/import functionality, supporting 100+ tasks without performance degradation
- Implemented installable PWA 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, 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%
- Designed glassmorphism UI with dark/light theme toggle and responsive mobile-first layout using Tailwind CSS, achieving 90% user satisfaction score

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

Aug 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

Aug 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

Jul 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
- Created responsive HTML template with CSS optimizations specifically designed for ATS parsing and professional PDF output
- Achieved 100% formatting consistency across multiple resume versions with automated build process reducing update time by 90%
- Integrated error handling and validation checks ensuring reliable PDF generation with proper font rendering and layout preservation

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

Resume Chatbot | IBM WatsonX Assistant

Sep 2025

- Created conversational AI chatbot with 95% intent recognition for 50+ daily queries using advanced prompt engineering techniques
- Developed 50+ intent dataset for natural dialogue flow ensuring comprehensive user query coverage
- Deployed on Netlify with 99.9% uptime achieving consistent high-availability performance

Technologies: IBM WatsonX Assistant, HTML5, CSS3, Netlify

Personal AI Assistant | Python, Hugging Face, Gradio

Sep 2025

- Built Python-based assistant with Gradio, handling 200+ daily queries with intelligent response generation
- Implemented NLP for context-aware responses, reducing errors by 20% through optimized prompt engineering
- Deployed on Hugging Face Spaces with public API access enabling broader community usage

Technologies: Python, Gradio, NLP, Hugging Face Spaces

Complete Project Access: All project demonstrations, live system access, and certification verifications are available at the portfolio website above. Each implementation showcases practical AI integration expertise with quantified business outcomes and full source code availability.

INDUSTRY CERTIFICATIONS

Google Cloud Platform

Prompt Design in Vertex AI
Build Real World AI Applications with Gemini and Imagen
Explore Generative AI with Vertex AI Gemini API

IBM Artificial Intelligence

Artificial Intelligence Fundamentals
Generative AI in Action
Deep Learning Essentials
Build Your Own Chatbot - Level 1

Microsoft Azure AI

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

Industry Recognition

Deloitte Australia's Data Analytics Completion Certificate | Deloitte-Forage
LFS118: Ethical Principles for Conversational AI | Linux Foundation

Additional Qualifications & Achievements

AI Content Creation: Produced 50+ AI-generated YouTube Shorts, achieving 10K+ views
Open Source Contribution: Beta-tested 3+ AI tools, providing actionable feedback to developers
Continuous Learning: Qualified for BITSOM x Masai Product Management with Generative AI (2025)
Self-Learning: Mastered AI/ML curriculum through comprehensive online resources (Coursera, YouTube, Hugging Face)

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