VAMSIKRISHNA NALLAGATLA

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SUMMARY

AI/ML Engineer skilled in developing scalable, AI-driven applications with a focus on Python, GPT-based tools, and modular backend systems. Adept at leveraging Hugging Face, OpenAI API, and AWS for end-to-end solutions, from prototyping to deployment. Strong foundation in software engineering principles, CI/CD processes, and version control, with a passion for building intelligent, user-centric AI systems that solve complex real-world problems.

TECHNICAL SKILLS & TOOLS

Programming Languages: Python, Java, SQL
Data & Visualization: Matplotlib, Seaborn, Power BI
Web & Frontend: HTML5, CSS, JavaScript, Bootstrap
Software Engineering: OOP, Modular Architecture, Agile, CI/CD Pipelines
Cloud & DevOps: AWS (EC2, Lambda, S3), Git, GitHub, GitHub Actions, CLI Development
AI/ML & NLP Frameworks: Hugging Face Transformers, OpenAI API, Scikit-Learn, EasyOCR, Sentence Transformers, Prompt Engineering, T5, TF-IDF

PROJECTS

Encountering Fake Messages from Text or Image Using Machine Learning **08/2022 – 10/2022**
Academic Project
Technologies: Python, Machine Learning, EasyOCR, SVM, Logistic Regression, Naive Bayes, KNN

- Assessed performance across 5,500+ samples, achieving a peak accuracy of 98.56% using SVM
- Demonstrated real-world applications for secure messaging platforms through effective content filtering strategies
- Co-authored a peer-reviewed publication introducing a hybrid ML-OCR model to detect spam in both textual and visual formats
- Built a dual-input classification pipeline using EasyOCR for image-to-text extraction and supervised ML models (SVM, Logistic Regression, KNN) for spam detection
- **Published Paper**

InsightAlert – Meeting Summarizer & Action Item Extractor **01/2025 – 02/2025**
Personal Project
Technologies: Python, T5 Transformers, Hugging Face, Regex

- Built an evaluation harness to benchmark output across varied meeting formats and styles
- Engineered preprocessing logic to convert noisy transcripts into structured, sentence-level inputs
- Fine-tuned T5 for dual-output generation: concise meeting summary and bullet-style action tasks
- Created an NLP-driven tool that summarizes meeting transcripts and extracts key action items using Hugging Face's T5 model
- **Project Link**

IntelliFeed Pro – Personalized News Recommender **02/2025 – 03/2025**
Personal Project
Technologies: Python, T5 Transformers, Hugging Face, Regex

- Integrated News API to fetch real-time article metadata and full-text content, ensuring up-to-date recommendations
- Modularized backend logic to ensure scalability, support topic filtering, and provide explainability for recommended articles
- Employed TF-IDF vectorization and cosine similarity to model article-user preference matching, optimizing for relevance and accuracy
- Simulated user interest profiles and conducted multi-user testing to refine recommendation accuracy and improve personalization

- Developed a content-based news recommender system utilizing natural language processing (NLP) and similarity scoring to deliver personalized news feeds
- **Project Link**

Devmate – AI Code Review Assistant **03/2025 – 04/2025**
Personal Project
Technologies: Python, OpenAI API, Regular Expressions, CLI, Prompt Engineering

- Designed regex-based filters to isolate code logic blocks, enhancing GPT's analysis by ensuring precise context input
- Optimized output readability and modularized backend logic to enable future GUI or VS Code extension integration
- Utilized prompt chaining and role-based prompts to distinguish between code functions, comments, and style issues, improving review accuracy
- Developed a command-line tool leveraging OpenAI's GPT API to perform AI-driven code reviews, providing inline suggestions for improvement
- **Project Link**

AutoPromptX – Dynamic Prompt Generator for GPT Tools **04/2025 – 05/2025**
Personal Project
Technologies: Python, OpenAI API, CLI, Prompt Engineering

- Enabled prompt export and plug-in support for broader usability in GenAI-powered applications
- Designed prompt chaining logic and extensible architecture to support multi-prompt workflows and future GUI features
- Built a modular Python toolkit to create, test, and organize GPT prompts via CLI with real-time OpenAI API integration
- **Project Link**

PUBLICATIONS

Automatic Language Identification and Conversion System: *IJRAR, Volume 10, Issue 2, 2023*

- Developed a system for automatic identification and switching of language in text streams
- Co-authored a peer-reviewed paper on real-time language detection and conversion using NLP and machine learning models
- **Publication Link**

CERTIFICATIONS

- **Amazon Web Services (AWS):** Certified Cloud Practitioner
- **HackerRank:** SQL (Basic), Python (Basic), Problem Solving (Basic)
- **Coursera:** Data Analysis with Python , Python for Data Science, AI and Development, Agile Software Development & Database Management Essentials

EXPERIENCE

Web Developer Intern **05/2022 - 6/2022**
SmartKnower

- Created and implemented an intuitive front-end interface, improving user experience by optimizing functionality and responsiveness across various devices and screen sizes
- Designed and developed a responsive web application using HTML, CSS, and JavaScript, ensuring modern web standards and cross-browser compatibility to enhance accessibility and user reach

EDUCATION

Master of Science: **Computer Science** **Expected in 06/2025**
DePaul University | **GPA: 3.0/4.0** Chicago, Illinois, USA

Bachelors of Technology: **Computer Science and Engineering** **07/2023**
GITAM University | **GPA: 2.9/4.0** Visakhapatman, Andhra Pradesh, IN