

Nilesh Verma

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PROFILE SUMMARY

AI Solutions Architect with 5+ years of experience integrating end-to-end systems across Generative AI, ML, Computer Vision, NLP, and Data Streaming. Proven track record in developing scalable automations and popular open-source tools (80k+ downloads). Completing a Ph.D. in AutoML at the University of Waikato, and **available to join immediately.**

WORK EXPERIENCE

Project Assistant

TAIAO, AI Institute, University of Waikato

- Contributing to **Weka Web** and **Weka Copilot** to make machine learning accessible to millions of users worldwide.
- Building **end-to-end ML pipelines** and **helping companies integrate AI solutions**, including computer vision, LLM agents, and streaming ML.

Jan 2025 – Present
Hamilton, New Zealand
(Hybrid)

Research Visitor

CNRS Labs, Sorbonne Université

- Conducted a short-term research visit focusing on **AutoML** and model selection for streaming and **real-world ML workloads**.
- Worked on **Bayesian optimization methods** and built a hyperparameter optimization framework to tune models under resource constraints efficiently.

Sep 2025 – Oct 2025
Paris, France

AI Consultant

Moana Digital Solutions (Part - Time) [🔗](#)

- Developed AI **micro SaaS** products, including APIs for grammar checking, text completion, and web search bots, and built a comprehensive law AI Solution.
- Worked on the **Advanced RAG** project utilizing **LLM**, ChatGPT APIs, and **LangChain**, and developed AI Coach, a complete audio bot solution for voice interaction with LLM.

Nov 2023 – Aug 2024
Auckland, New Zealand

Data Scientist

Amlgo Labs [🔗](#)

- Working in the automotive industry to create end-to-end **AI analytical applications** on the **AWS Cloud**.
- Work on unstructured text data, **extracting information** (vehicle part names, categories, etc.) using **NLP predictive modelling** techniques and converting it into useful information.
- Responsible for developing, testing, and deploying **information extraction** and **social media analysis** pipelines.

May 2022 – Jun 2023
Gurugram, India

Data Scientist

Xceedance Inc [🔗](#)

- Developing **deep learning** and **machine learning** models for **natural language processing** and **computer vision tasks** such as BERT, YOLO, and others.
- Worked on **data extraction** from unstructured raw data such as emails, pdfs, images, and so on, using AI and data mining techniques.

May 2021 – May 2022
Gurugram, India

ML Developer

Ganani.ai [🔗](#)

- Worked on **speech/text** analytics and created **Natural Language Processing (NLP) models** for **regional languages** such as Hindi, Tamil, and Marathi.
- We built a **Conversation AI solution** for multiple languages.
- Used different frameworks to compare NLP models and deploy them as an API.

May 2020 – May 2021
Bangalore, India

RECENT PUBLICATIONS & PATENT

- Verma, N., Bifet, A., Pfahringer, B., & Bahri, M.** “**Bayesian Stream Tuner: Dynamic Hyperparameter Optimization for Real-Time Data Streams.**” Proceedings of the 31st ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD 2025)
- Verma, N., Bifet, A., Pfahringer, B., & Bahri, M.** “**Auto-Reg: A Dynamic AutoML Framework for Streaming Regression.**” Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD 2025), LNCS, pp. 245–256.
- Verma, N., Bifet, A., Pfahringer, B., & Bahri, M.** “**ASML: A Scalable and Efficient AutoML Solution for Data Streams.**” AutoML 2024 – International Conference on Automated Machine Learning, Paris, France.
- Verma, N., & Hota, R. K.** “**Design and Development of Machine Learning-Based Depression Identification Decision Support System.**” In *Machine Learning for Real World Applications*, pp. 61–78, 2024.
- Verma, N.** “**Python Adventures: A Beginner’s Guide for Young Coders.**” Book, 2023 (Amazon Kindle & Google Books).
- Bhatia, L., Ghosh, D., Sahu, D. K., Sarangi, P. K., & **Verma, N.** “**A device for the production of ethanol from lignocellulosic biomass.**” DE Patent 202022102746, German Patent and Trademark Office, 2022. [🔗](#)


OPEN SOURCE CONTRIBUTION

Deep Image Search - AI-Based Image Search Engine [🔗](#)


Deep Image Search is an AI-based image search engine that includes deep transfer learning features Extraction and tree-based vectorized search technique.

AutoWave - Automatic Audio Classification Library [🔗](#)

AutoWave is a complete audio automatic classification library with other features plottings, audio augmentation, data loading etc.

Deep Text Search - AI Based Text Search & Recommendation System 

Deep Text Search is an AI-powered multilingual text search and recommendation engine with state-of-the-art transformer-based multilingual text embedding (50+ languages).

SSEM (Semantic Similarity Based Evaluation Metrics) 

SSEM is a semantic similarity-based evaluation library for natural language processing (NLP) text generation tasks. It supports various similarity metrics and evaluation levels, and is compatible with any Hugging Face pre-trained transformer model.

SKILLS

Generative AI & LLMs OpenAI GPT, Claude, Gemini, LangChain, CrewAI, RAG systems, Prompt Engineering, Fine-Tuning, Agentic Workflows, Multimodal AI, Hugging Face Transformers, Multi-Agent Orchestration	Programming Language Python, JavaScript, C++, LaTeX
Frameworks Pandas, NumPy, Scikit-learn, Keras, BeautifulSoup, NLTK, OpenCV, TensorFlow, PyTorch, FastAI, River, Weka, Seaborn, Plotly	Tools Microsoft Visual Studio Code, Anaconda IDE, Google Colab, GitHub Copilot, AI Coding IDEs, n8n
Cloud & DevOps AWS, Azure, GCP, Docker, Kubernetes, Nginx, Git, MLOps, MLFlow	Web Development & APIs React, FastAPI, Flask, Node.js, Tailwind CSS, Bootstrap, RESTful APIs, WebSockets, WebRTC, HTML5, CSS3, Twilio.
Databases PostgreSQL, MongoDB, Redis, SQL, Vector Database, Chroma, FAISS	






ACHIEVEMENTS

- Awarded the **Research and Enterprise Scholarship** by the **University of Waikato** for my **Ph.D. studies**.
- Recognition of being placed **3rd** in **AppScript**, A 48-Hours Hackathon Conducted by **IEEE APSIT** on 6-7th Feb 2021.
- Secured **1st rank** in *The Great Indian Hiring Hackathon (Nov-20)* based on Foretelling the Retail Price Host by **MachineHack**.
- Achieved **1st rank** in *Data Sprint #16: Electronic Products Pricing Hackathon (December 2020)* hosted by **DPhi**.
- **1st rank** in **Robotics, Big Data, and Android Application Development** university-level workshop.
- Various state-level news covers the development of real-time covid-19 detection through CT-Scan software.
- Cleared **NTA-NET exam** on the **first attempt** and eligible for assistant professor in all over India.


PROJECTS

AkoDesk – AI Voice Calling Platform AI voice calling platform providing intelligent voice assistants for business communications, including inbound and outbound calling workflows.
BhriguGPT – AI Spiritual Guidance Platform AI-powered platform combining Vedic astrology and related systems with conversational AI for personalized spiritual guidance.
OmniScholar – AI Research Productivity Platform AI platform that streamlines academic workflows from literature discovery to publication with summarization, note-taking, and research agents.
Weka.ai - Machine Learning for Everyone Making machine learning and data science accessible to everyone. No complex setup, no steep learning curves, just powerful AI tools that work.

CERTIFICATES

Python 101 for Data Science  IBM Cognitiveclass (2020)	Deep Learning Specialization  DeepLearning.ai (2020)	Machine Learning Specialization  WU (2020)
Data Science Math Skills  Duke University (2020)	Problem Solving  HackerRank(2020)	

EDUCATION

Doctor of Philosophy (PhD) <i>University of Waikato</i>  <ul style="list-style-type: none">• Automated Machine learning (AutoML) for Data Streams	Jul 2023 – present Hamilton, New Zealand
M.Sc. Computer Science & Application <i>Atal Bihari Vajpayee Vishwavidyalaya</i> <ul style="list-style-type: none">• Gold Medalist	Jul 2018 – Jul 2020 Bilaspur, India
B.Sc. Computer Science and Application <i>Bilaspur University</i> <ul style="list-style-type: none">• Gold Medalist	Jul 2014 – Jul 2017 Bilaspur, India

LANGUAGES

English Fluent	Hindi Native
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