JURGEN KOLA

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Jurgen Kola
JurgenKola1

EDUCATION

Fitchburg State University, Fitchburg, MA   **2021 - 2025**

Bachelor of Science: Computer Science

PROFESSIONAL SUMMARY

Dynamic AI/ML Engineer and Software Developer with hands-on experience building real-world **AI systems**, including voice-based agents, **NLP chatbots, and ML-powered tools.** Strong in **Python, OpenAI APIs, SQL,** and end-to-end model integration using **TensorFlow, PyTorch, and Scikit-learn**. Proven ability to design architectures, lead teams, and deploy scalable solutions. Backed by **4 years of IT experience in system maintenance, automation, and technical support** — now focused on driving innovation through machine learning and AI product development.

Technical Skills

- **Programming Languages**: Python, C, TypeScript, JS, Java, C++, R, PHP, HTML, Prolog
- **ML Tools**: Pandas, NumPy, Matplotlib, Seaborn, scikit-learn, TensorFlow, PyTorch, Jupyter, spaCy, Hugging Face
- **Frameworks:** Flask, Django, FastAPI, Tkinter
- **Databases:** MySQL, PostgreSQL, Microsoft SQL Server, SQLite3, MongoDB, SQLAlchemy, phpMyAdmin
- **Other Tools:** GitHub, GitLab, XAMPP, venv
- **AI** : GenAI, AgentAI, Deep Learning, NLP, NLU, LLM, Computer Vision, Cloud Computing
- **API**: REST, SOAP, GreaphQL, gRPC, WebSockets.

PROFESSIONAL EXPERIENCE

AI / ML Engineer Internship | NARB | Remote (USA) | May 2025 – Present

- **Led development of a voice-based AI agent as the first AI/ML hire. Designed system architecture and integrated TTS, STT, LLM, Twilio, MongoDB and PostgreSQL Using Python. Managed technical roadmap, broke down tasks, and led 15 engineers team. Recruited team members, assigned work, and ensured alignment with the product goals.**

IT Help Desk Technician | Fitchburg State University, Fitchburg, MA — Jan 2021 – May 2025

- **Resolved 400+ Tech support cases and maintained hardware/software systems. Managed tickets and supported classroom emergency. Managed Inventory database. Set up the equipment for classes all over the campus(Projector, Podium, cabling, PC's, VMware servers)**

Co-Founder & Software Developer | Educational Video Generator — Self-Employed —October 2022— present

- **Developed a tool to automate AI- Powered for Educational Video, using OpenAI API, build slide generation and integrated (TTS) using Python(LLM, Vision, Moviepy, PIL.) Currently, self-used building YouTube Content.**

Freelance Software Developer | EDILAGRONBAU SRLS | Remote (Italy) — May 2024 July 2024

- **Designed and implemented AI chatbot logic for a landscaping business, developed rule-based systems for FAQ, pricing, and booking inquiries. Using some of the technologies like Python, Flask, NPL, Team Collaboration,**

Rock Classification Using ML | Scientific Research Project | Fitchburg State University Jan 2025 – May 2025

- **Build and trained lightweight CNN model to classify rock types from images. Achieved high accuracy despite limited data using augmentation and class balancing. Deployed results in Flask app.**

ENGINEERING AND PROGRAMMING PROJECTS

- **Virtual Assistant**: Developed a Python-based virtual assistant to assist with daily tasks, integrating **Kokoro** model TTS and speech recognition

- **Machine Learning Model Development: Implanted multiple ML algorithms (KNN, SVM, Decision Tree, Random Forest, Naïve Bayes) using scikit-learn: performed full pipeline including data cleaning, processing, feature engineering, model training, validation, and evaluation on real world datasets.**
- **AI Chatbot for Customer Support:** Developed an **NLP** chatbot using **Hugging Face Transformers, GPT-4 API, RASA, and spaCy for customer support, deployed on AWS/GCP.**