Kartik Lodhi – Professional Profile

**Personal and Contact Information:** Kartik Lodhi is a computer science graduate based in Bhopal, India. He can be reached at phone +91 9981470953 and via email at kartiklodhi20011@gmail.com[[1]](file://file-MNokYKiuifL1swB6yGQbxY#:~:text=Kartik%20Lodhi%20%2B91998,GitHub). He maintains an active LinkedIn profile (Kartik Lodhi) and a GitHub account under “Kartik-001”[[1]](file://file-MNokYKiuifL1swB6yGQbxY#:~:text=Kartik%20Lodhi%20%2B91998,GitHub)[[2]](file://file-MNokYKiuifL1swB6yGQbxY#:~:text=mailto%3Akartiklodhi20011%40gmail.com%20https%3A%2F%2Fwww.linkedin.com%2Fin%2Fkartik), where he showcases his work (e.g. the “babygpt2” repository).

**Career Summary and Objectives:** Kartik holds a Bachelor of Technology in Computer Science Engineering (2020–2024) from the University Institute of Technology, RGPV, Bhopal[[3]](file://file-9KW6cm73ZzHT8Q7hRYbqs9#:~:text=University%20Institute%20of%20Technology,Bhopal%2C%20MP). He specializes in artificial intelligence and machine learning, with hands-on experience building deep learning models from scratch[[4]](file://file-MNokYKiuifL1swB6yGQbxY#:~:text=Professional%20Summary%20Computer%20Science%20graduate,skills%20to%20solve%20complex%20challenges). His projects have involved constructing advanced transformer-based models (including custom byte-pair encoding tokenizers) and end-to-end training pipelines[[4]](file://file-MNokYKiuifL1swB6yGQbxY#:~:text=Professional%20Summary%20Computer%20Science%20graduate,skills%20to%20solve%20complex%20challenges)[[5]](file://file-MNokYKiuifL1swB6yGQbxY#:~:text=%E2%80%A2%20Built%20a%20generative%20transformer,evaluate%20and%20validate%20text%20generation). Kartik is currently seeking a Data Science or AI Engineer role where he can apply his proficiency in Python, PyTorch, and NLP techniques to solve complex challenges[[4]](file://file-MNokYKiuifL1swB6yGQbxY#:~:text=Professional%20Summary%20Computer%20Science%20graduate,skills%20to%20solve%20complex%20challenges).

**Education and Qualifications:** Kartik earned his B.Tech degree in Computer Science Engineering (2024) from UIT-RGPV, Bhopal[[3]](file://file-9KW6cm73ZzHT8Q7hRYbqs9#:~:text=University%20Institute%20of%20Technology,Bhopal%2C%20MP), graduating with a 7.85/10 GPA[[6]](file://file-9KW6cm73ZzHT8Q7hRYbqs9#:~:text=University%20Institute%20of%20Technology,Bhopal%2C%20MP). His academic coursework included Machine Learning, Data Structures and Algorithms, Data Mining, and Statistical Analysis[[6]](file://file-9KW6cm73ZzHT8Q7hRYbqs9#:~:text=University%20Institute%20of%20Technology,Bhopal%2C%20MP), providing a strong theoretical foundation for his AI/ML work.

**Technical Skills:** Kartik is highly skilled in Python (advanced level) and also proficient in SQL[[7]](file://file-9KW6cm73ZzHT8Q7hRYbqs9#:~:text=Languages%3A%20Python%20). He has hands-on experience with AI/ML frameworks such as PyTorch, TensorFlow, and Scikit-learn, and specialized in natural language processing and transformers[[7]](file://file-9KW6cm73ZzHT8Q7hRYbqs9#:~:text=Languages%3A%20Python%20). His toolkit includes data processing and analysis libraries like Pandas and NumPy, visualization tools (Matplotlib, Seaborn), web scraping (BeautifulSoup), and development tools such as Git, VS Code, Streamlit, and MySQL[[7]](file://file-9KW6cm73ZzHT8Q7hRYbqs9#:~:text=Languages%3A%20Python%20). This broad technical skill set underpins his ability to engineer and deploy machine learning solutions.

**Professional Experience (Internship):** During May–July 2023, Kartik interned as an Artificial Intelligence professional at Agratas Edutech Pvt. Ltd. in Bhopal[[8]](file://file-MNokYKiuifL1swB6yGQbxY#:~:text=Agratas%20Edutech%20Pvt%20Ltd%20May,Artificial%20Intelligence%20Intern%20Bhopal%2C%20MP). In this role, he made significant contributions to the team’s ML projects: he improved a predictive model’s accuracy by 15% and increased data pipeline efficiency by 30% through optimized use of Pandas and NumPy[[9]](file://file-MNokYKiuifL1swB6yGQbxY#:~:text=%E2%80%A2%20Improved%20prediction%20accuracy%20by,of%20more%20efficient%20training%20strategies). He also developed and deployed a Streamlit-based sentiment analysis tool to deliver actionable user insights, and researched NLP techniques that led to more efficient training strategies for the team[[9]](file://file-MNokYKiuifL1swB6yGQbxY#:~:text=%E2%80%A2%20Improved%20prediction%20accuracy%20by,of%20more%20efficient%20training%20strategies). These accomplishments demonstrate Kartik’s practical impact on real-world AI projects and his ability to translate research into production-ready tools.

**Key Projects:** Kartik’s portfolio features several in-depth AI projects. In one project, he built an end-to-end generative transformer model (inspired by GPT) entirely from scratch[[5]](file://file-MNokYKiuifL1swB6yGQbxY#:~:text=%E2%80%A2%20Built%20a%20generative%20transformer,evaluate%20and%20validate%20text%20generation). He implemented a custom byte-pair encoding (BPE) tokenizer and engineered a full training pipeline with learning rate scheduling, gradient clipping, and dropout regularization[[5]](file://file-MNokYKiuifL1swB6yGQbxY#:~:text=%E2%80%A2%20Built%20a%20generative%20transformer,evaluate%20and%20validate%20text%20generation). He trained this model on the Tiny Shakespeare dataset and evaluated its performance using perplexity-based metrics, demonstrating his capability to develop complex NLP models from the ground up[[5]](file://file-MNokYKiuifL1swB6yGQbxY#:~:text=%E2%80%A2%20Built%20a%20generative%20transformer,evaluate%20and%20validate%20text%20generation). In another project, Kartik re-implemented the original “Attention Is All You Need” Transformer architecture[[10]](file://file-MNokYKiuifL1swB6yGQbxY#:~:text=%E2%80%A2%20Re,head%20attention%20and%20positional%20encoding). This effort involved coding multi-head self-attention and positional encoding modules and training the model for a machine translation task. Through hyperparameter tuning he achieved a competitive BLEU score, and he published well-documented code of this Transformer implementation for public use[[11]](file://file-MNokYKiuifL1swB6yGQbxY#:~:text=%E2%80%A2%20Re,head%20attention%20and%20positional%20encoding). These projects highlight both his deep understanding of transformer models and his commitment to sharing knowledge via open-source contributions.

**Online Presence and Contribution Goals:** Kartik actively documents his work online. He maintains a personal portfolio website (hosted on GitHub Pages) where he provides an overview of his background, skills, and projects. His GitHub profile (Kartik-001) contains the source code for his projects (including the “babygpt2” language model)[[2]](file://file-MNokYKiuifL1swB6yGQbxY#:~:text=mailto%3Akartiklodhi20011%40gmail.com%20https%3A%2F%2Fwww.linkedin.com%2Fin%2Fkartik). He lists his contact information and social links on these platforms, encouraging engagement. Through this online presence, Kartik aims to contribute to the wider tech community by open-sourcing his work and collaborating on projects.

**Motivations and Areas of Interest:** Kartik’s personal journey reflects a passion for cutting-edge AI. He focuses on innovative machine learning techniques (evidenced by his transformer and tokenizer work[[4]](file://file-MNokYKiuifL1swB6yGQbxY#:~:text=Professional%20Summary%20Computer%20Science%20graduate,skills%20to%20solve%20complex%20challenges)) and has a strong interest in their application to real-world problems. Specifically, he is motivated to explore applications of AI in robotics and autonomous systems, while emphasizing ethical AI development. His stated goals include advancing AI capabilities responsibly and integrating AI solutions into tangible robotics and autonomous agent projects. These interests, along with his goal of continuous learning and sharing knowledge, guide his career trajectory and contributions.

**Summary:** In summary, Kartik Lodhi is a motivated AI/ML specialist and recent computer science graduate with a track record of hands-on projects and internship experience[[4]](file://file-MNokYKiuifL1swB6yGQbxY#:~:text=Professional%20Summary%20Computer%20Science%20graduate,skills%20to%20solve%20complex%20challenges)[[9]](file://file-MNokYKiuifL1swB6yGQbxY#:~:text=%E2%80%A2%20Improved%20prediction%20accuracy%20by,of%20more%20efficient%20training%20strategies). His strong technical skills, documented in both academic and practical settings, and his clear objectives in AI engineering make him well-positioned for roles in data science, machine learning, and AI development. His online portfolio and GitHub contributions demonstrate both his expertise and his commitment to growth in areas like NLP, autonomous robotics, and ethical AI innovation[[4]](file://file-MNokYKiuifL1swB6yGQbxY#:~:text=Professional%20Summary%20Computer%20Science%20graduate,skills%20to%20solve%20complex%20challenges)[[2]](file://file-MNokYKiuifL1swB6yGQbxY#:~:text=mailto%3Akartiklodhi20011%40gmail.com%20https%3A%2F%2Fwww.linkedin.com%2Fin%2Fkartik).

[[1]](file://file-MNokYKiuifL1swB6yGQbxY#:~:text=Kartik%20Lodhi%20%2B91998,GitHub) [[2]](file://file-MNokYKiuifL1swB6yGQbxY#:~:text=mailto%3Akartiklodhi20011%40gmail.com%20https%3A%2F%2Fwww.linkedin.com%2Fin%2Fkartik) [[4]](file://file-MNokYKiuifL1swB6yGQbxY#:~:text=Professional%20Summary%20Computer%20Science%20graduate,skills%20to%20solve%20complex%20challenges) [[5]](file://file-MNokYKiuifL1swB6yGQbxY#:~:text=%E2%80%A2%20Built%20a%20generative%20transformer,evaluate%20and%20validate%20text%20generation) [[8]](file://file-MNokYKiuifL1swB6yGQbxY#:~:text=Agratas%20Edutech%20Pvt%20Ltd%20May,Artificial%20Intelligence%20Intern%20Bhopal%2C%20MP) [[9]](file://file-MNokYKiuifL1swB6yGQbxY#:~:text=%E2%80%A2%20Improved%20prediction%20accuracy%20by,of%20more%20efficient%20training%20strategies) [[10]](file://file-MNokYKiuifL1swB6yGQbxY#:~:text=%E2%80%A2%20Re,head%20attention%20and%20positional%20encoding) [[11]](file://file-MNokYKiuifL1swB6yGQbxY#:~:text=%E2%80%A2%20Re,head%20attention%20and%20positional%20encoding) Kartik\_Lodhi\_Resume.pdf

<file://file-MNokYKiuifL1swB6yGQbxY>

[[3]](file://file-9KW6cm73ZzHT8Q7hRYbqs9#:~:text=University%20Institute%20of%20Technology,Bhopal%2C%20MP) [[6]](file://file-9KW6cm73ZzHT8Q7hRYbqs9#:~:text=University%20Institute%20of%20Technology,Bhopal%2C%20MP) [[7]](file://file-9KW6cm73ZzHT8Q7hRYbqs9#:~:text=Languages%3A%20Python%20) Kartik\_Lodhi\_Resume.docx

<file://file-9KW6cm73ZzHT8Q7hRYbqs9>