

# Arnav Kucheriya

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## EDUCATION

<b>New Jersey Institute of Technology (NJIT)</b> <i>B.S. / M.S. Computer Science, Minor in Applied Statistics</i> <ul style="list-style-type: none"><li>Dean's List Scholar, Highlander Achievement Scholar, Upkar (IACF) Achievement Scholar</li><li>Vice President - NJIT Badminton</li></ul>	Sep 2023 – May 2028 Newark, NJ
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## PROFESSIONAL EXPERIENCE

<b>Applications Development Intern</b> <i>Cravath, Swaine and Moore LLP.</i> <ul style="list-style-type: none"><li>Designed and developed a RAG application PoC leveraging semantic search and Ollama models to vector-embed real-time SQL data and enable Natural Language Querying (NLQ) with Generative Reporting.</li><li>Restructured and optimized enterprise SSRS (SQL Server Reporting Services) reporting framework, enhancing report performance, accuracy, and usability through cross-verification, parameterized queries, and standardized templates.</li><li>Engineered and deployed production-grade CI/CD pipelines in Azure DevOps for multiple applications, integrating Node.js runtime setup within pipelines and automated IIS web service deployment.</li><li>Developed a secure web application that processes unstructured data (email) to assist Legal Partners track Associate staffing KPI's, and modify real-time SQL database records through UI.</li></ul>	Jun 2025 – Present New York City, NY
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<b>Undergraduate Research Assistant</b> <i>New Jersey Institute of Technology (NJIT)</i> <ul style="list-style-type: none"><li>Engineered machine learning models for real-time solar radio burst detection, enhancing space weather prediction.</li><li>Preprocessed large datasets with Pandas, NumPy, and Scikit-learn, ensuring data readiness and model reliability.</li><li>Validated predictive models and contributed to research publications, utilizing TensorFlow for optimized analytics.</li></ul>	Jun 2024 – Jun 2025 Newark, NJ
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<b>ML Technology Intern</b> <i>Isotropic Solutions Inc.</i> <ul style="list-style-type: none"><li>Deployed a Machine Learning-driven HR recruitment platform for the Central Bank of Oman (CBO), leveraging Python, and PostgreSQL to automate candidate screening and ranking. Integrated NLP-based resume parsing and analytics dashboards.</li><li>Designed an automation pipeline for data ingestion, validation, and integration processes, improving transaction efficiency, while ensuring high availability and fault tolerance for the State Bank of Vietnam (SBV).</li><li>Built and deployed a REST API using FastAPI and PostgreSQL to streamline data storage and ML model integrations, integrating automated testing and CI/CD pipelines for continuous delivery.</li></ul>	Sep 2024 – Feb 2025 New York City, NY
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<b>Database Automation Engineer Intern</b> <i>JEI Learning Centers, LLC.</i> <ul style="list-style-type: none"><li>Automated large data ETL processes with Python, Django, and PostgreSQL, reducing processing time by 40%.</li><li>Synchronized multi-platform databases, ensuring 100% data accuracy and integrity.</li><li>Integrated user data with marketing platforms (Keap, Hi-Sawyer, Wix), increasing campaign targeting efficiency.</li></ul>	Jan 2024 – Aug 2024 Jersey City, NJ
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## PROJECTS

<b>Market Prediction with Machine Learning</b>   <i>Python, yfinance, Pandas, Matplotlib, AWS, .NET, C# Assemblies.</i> <ul style="list-style-type: none"><li>Developed a financial analysis tool to predict stock prices using Machine Learning algorithms, deployed on AWS.</li><li>Implemented and fine-tuned models such as linear regression and decision trees, deployed on Google Cloud.</li><li>Visualized results using Matplotlib, providing real-time insights for data-driven investment strategies.</li></ul>
<b>Character-Level Language Modeling with Transformers</b>   <i>Python, TensorFlow, Pandas, CI/CD.</i> <ul style="list-style-type: none"><li>Developed Character-Level Language Models: Statistical Bigram model and GPT-style Transformer, trained on Shakespearean text. Custom GPU-enabled training loop optimized for tracking loss, perplexity, and GPU memory usage.</li><li>Core Transformer components including multi-head self-attention, layer normalization, and positional embeddings.</li></ul>

## TECHNICAL SKILLS

## CERTIFICATIONS

<ul style="list-style-type: none"><li><b>Languages and Frameworks:</b> Python, C/C++, C (assemblies), SQL (Postgres), JavaScript, HTML/CSS, Java, Rust, React, Node, TypeScript, XML.</li><li><b>Developer Tools:</b> Linux, Git, Docker, Azure DevOps, SSRS, Jenkins, MS Excel, React, NodeJS, Flask, FastAPI, Ollama, Cursor, PyTorch, Cuda, AWS Bedrock, LangChain, FAISS, Pandas.</li></ul>	<ul style="list-style-type: none"><li><b>AWS Cloud Practitioner:</b> In Progress</li><li><b>Google Cyber Security:</b> Google</li><li><b>Python Programming:</b> OpenEDG Institute</li><li><b>Generative AI Fundamentals:</b> Microsoft</li></ul>
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