# NICHOLAS HOLMES

## CONTACT

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## PROFESSIONAL SUMMARY

As a professional passionate about Python AI and software development, I leverage my skills in high-stakes projects, prioritizing efficiency and exceeding benchmarks. My work ethic, marked by reliability and adaptability, is crucial in the ever-changing software industry. I emphasize detail and innovation to meet and surpass expectations.

My career is defined by continuous improvement and learning. With over 450 online courses and 10 certifications from Google, Amazon, Coursera, LinkedIn, and SoloLearn, my education is both broad and deep, showcasing my technical and soft skills. My LinkedIn profile highlights my abilities in team collaboration, strategic planning, and workflow optimization, along with communication and negotiation skills.

My core strength is innovative problem-solving, driven by a deep understanding of AI technologies. Regular work with Pair AI programming has sharpened my ability to streamline complex processes.

## EXPERIENCE

**PYTHON/AI DEVELOPER** *Apr 2023 - Current*
*JOS Group*, BETHESDA, Maryland

- **Data Visualization:** Developed and delivered compelling data visualizations, extracting and interpreting complex data from a multitude of file types. This expertise not only enhances data comprehensibility but also facilitates informed decision-making through clear, insightful data presentations.
- **AI-Driven Collaborative Programming Initiative:** Leveraged advanced AI methodologies to revolutionize collaborative programming practices, significantly boosting the efficiency and effectiveness of program development processes. This initiative underscores a commitment to adopting innovative technologies for streamlining development workflows and fostering team synergy.
- **AI Platform and Website Builder Evaluation Framework:** Initiated and executed an extensive evaluation framework encompassing over 100 AI platforms and numerous website builders. This framework meticulously assessed critical dimensions such as data privacy, cost-effectiveness, and user experience, providing invaluable insights for strategic decision-making and technology selection.
- **AI/ML Educational Labs Initiative:** Assisted in the development of an extensive AI/ML educational program, designed to impart practical business applications of AI using Python within a Jupyter Labs environment via Skills Network. The curriculum encompasses critical areas such as Sentiment Analysis, Retrieval-Augmented Generation (RAG), Data Understanding, Feature Engineering, and Neural Networks. It integrates advanced libraries including Hugging Face, LangChain, and IBM Watson, offering participants hands-on experience with leading AI technologies.
- **Advanced Tabular Data Analysis Tool:** Engineered a sophisticated tool for in-depth analysis of tabular data, aimed at uncovering insights and detecting fraudulent activities within healthcare datasets. The solution features an intuitive HTML interface for dynamic querying, incorporating visual analytics tools such as heatmaps and drive time maps to trace patient pathways. Additionally, it incorporates a Sankey Diagram for visualizing event flows, a search algorithm for navigating event paths, and a predictive model for forecasting subsequent events based on historical data. This comprehensive tool, developed in Python, operates locally and serves as a pivotal resource for data-driven decision-making in healthcare.

## SKILLS

**AI and Machine Learning**
- *Deep Learning Frameworks:* Proficient in TensorFlow and PyTorch for building and training advanced neural network models.
- *Machine Learning Libraries:* Skilled in using Scikit-learn, NumPy, and Pandas for data manipulation and implementing machine learning algorithms.
- *Neural Networks:* Experienced in designing and implementing advanced neural network architectures, including Artificial Neural Networks (ANNs) and Retrieval Augmented Generation Models (RAG)

My GitHub projects, though not exhaustive for security reasons, display my data analysis and AI modeling skills, including a 'Sankey_diagram' repository and AI-driven applications like an image classifier.

I am eager to explore how my skill set and experiences can contribute to the success of your team and projects. I appreciate your consideration of my application.

## ADDITIONAL-INFO

My LinkedIn profile showcases my dedication to professional growth in Python, full-stack development, and AI, with over 450 courses and certifications completed. This includes 10 prestigious certifications from Google and Amazon, and others from top online platforms like Coursera, LinkedIn, and SoloLearn. This mix of formal accolades and self-directed online learning highlights my commitment and adaptability in tech. You can view these certifications linked directly to my skills section, reflecting my daily learning endeavors.

- Linkedin: https://www.linkedin.com/in/nick-holmes-90264a217/
- GitHub: https://github.com/NickHolmes999?tab=repositories

- *Natural Language Processing (NLP):* Capable of applying NLP techniques for text analysis and understanding using libraries like Hugging Face and PyBrain.
- *AI Platforms:* Hands-on experience with IBM Watson for building AI-powered applications and utilizing LangChain for advanced AI integrations.

**Software Development**
- *Programming Languages:* Proficient in Python, with a solid understanding of HTML/CSS and JavaScript for front-end development.
- *Web Development:* Experienced in developing scalable web applications using Flask for the backend.
- *Code Optimization and Debugging:* Expertise in identifying bottlenecks, optimizing performance, and debugging complex software issues to enhance application efficiency.
- *Database Management:* Skilled in SQL for database querying and management, ensuring data integrity and performance.

**Software Tools and Collaboration**
- *Integrated Development Environments (IDEs):* Highly proficient with PyCharm and Visual Studio Code (VSCode) for efficient coding, debugging, and version control.
- *Version Control:* Experienced in using Git for source code management, facilitating collaboration and project tracking.
- *Project Management Tools:* Familiar with Agile development methodologies and tools like Trello for managing project workflows and team collaboration.

**Additional Skills**
- *Data Analytics:* Capable of employing data visualization tools and techniques to derive actionable insights from complex datasets.
- *Soft Skills:* Strong in sales/communication, effective team collaboration, and meeting project milestones, essential for cross-functional team success and client interactions.
- *Continuous Learning:* Committed to professional growth, having completed over 450 online courses and holding 10 certifications from prestigious companies like Google and Amazon.