Nick Coffman

✉ nicholastimothycoffman@gmail.com 📞 (217) 971-6997 🌐 nicholastimothycoffman.github.io
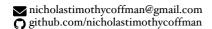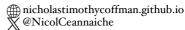🐙 github.com/nicholastimothycoffman in linkedin.com/in/nicholastimothycoffman 𝕏 @NicolCeannaiche

Technical Skills

Languages:
Proficient: Java, C++, Python
Familiar: JavaScript, C

Frameworks and Tools:
Proficient: Qiskit, TensorFlow, Pandas, LaTeX, Jupyter, Scikit-learn, NumPy
Familiar: Linux, PyTorch, Matplotlib, AWS SageMaker

Relevant Experience & Projects

- **AustinTraffic-QML: Quantum-Accelerated Neural Networks** *Sep '24 - Present*

  Developing a cloud-based hybrid model integrating quantum algorithms with neural networks to predict traffic congestion patterns in Austin, TX, using quantum-enhanced hyperparameter tuning and cloud deployment for scalable and efficient traffic flow forecasting.

- **Quantum-Enhanced Financial Risk Modeling** *Aug '24 - Present*

  Developing a cloud-based financial risk modeling system that integrates quantum algorithms and AI/ML models to simulate and predict market risks with enhanced accuracy, deployable on a scalable cloud platform with an interactive dashboard for financial analysts.

- **Quantum Key Distribution Protocol Demonstration** *Feb '24 - Apr '24*

  i) Developed a practical demonstration of the BB84 quantum key distribution protocol using Qiskit, showcasing secure cryptographic key exchange through quantum principles.
  ii) Simulated both scenarios with and without eavesdropping to illustrate the robustness of quantum cryptography in securing communication channels against quantum-enabled threats.

Previous Work Experience

- **French Tutor - Texas State University** *Sep '22 - May '24*

  Provided personalized tutoring in French to undergraduate students at Texas State University, helping them improve their language skills in grammar, vocabulary, and conversation.

- **Musician/Band Leader - Austin, TX** *Sep '13 - Present*

  i) Led the development, promotion, and execution of the band's creative projects, including song composition, studio recording, and album releases.
  ii) Managed band members and coordinated rehearsals, live performances, and studio sessions.
  iii) Designed and maintained the band's online presence across social media platforms, employing data-driven strategies to engage and expand the audience.
  iv) Oversaw all logistics including transportation, budgeting for tours, managing merchandise production, and acted as the main point of contact for venue booking and promoters, demonstrating strong organizational and multitasking abilities.
  v) Handled the band's visual element, designing album artwork, merchandise and marketing materials.

Foreign Languages

French: *Fluent*
Spanish: *Basic Knowledge*

German: *Basic Knowledge*
Italian: *Basic Knowledge*

Danish: *Basic Knowledge*
Latin: *Basic Knowledge*

Education

- **Texas State University, San Marcos** *July '24*

  Cumulative GPA: 3.34

  Relevant Coursework: Data Structures & Algorithms, Object-Oriented Programming, Software Engineering, Computer Architecture, Computer System Security, Network Science, Operating Systems

Certificates

Diplôme de Français Professionnel *May '24*

Diplôme d'Études en Langue Française *April '21*

Memberships & Affiliations

The National Society of Leadership and Success
Alpha Sigma Lambda Honor Society