

KRISHNA PANTHI

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EXPERIENCE

Clemson University — Research Assistant (South Carolina) January 2024 - Present

- Developed and evaluated deep learning time series forecasting models (N-HiTS, PatchTST, TiDE) using PyTorch and Pandas for agricultural optimization applications.
- Implemented numerical solutions for Richards' equation using Finite Difference Method, contributing to an open-source software - Aquacrop, a crop growth simulation model.

MutualArt — Software Engineer (Remote, Israel) November 2021 - December 2023

- Architected and implemented comprehensive sales and marketing systems using .NET Core, GraphQL, SQL Server, and Vue.js, achieving a 200% improvement in response rates and sales conversion.
- Developed an automated notification system using Quartz.NET for background processing, reducing manual intervention by 85% and improving user engagement through timely email notifications and reminders.
- Engineered containerization of three legacy applications to cloud-native solutions using Docker, streamlining deployment processes and enabling seamless migration across environments.
- Migrated a critical image processing pipeline from Python 2 to 3, resolving compatibility issues and improving I/O performance by 25% while maintaining system reliability.
- Developed a prototype NER system using Python, spaCy, and GPT API, achieving 90% accuracy in identifying key entities from unstructured text data.

PensionPro — Junior Software Engineer (Harrisburg, PA) April 2021 - January 2022

- Re-engineered key features from large-scale desktop application to web-based solution using Angular, .NET Core, and Microsoft Azure, modernizing the user experience for 5000+ enterprise clients.
- Optimized database performance by integrating a Redis caching layer, reducing query latency by 25% and improving application responsiveness.

EDUCATION

Clemson University, South Carolina, USA

January 2024 - December 2025 (Expected) Master of Science, Computer Science

- GPA: 3.87/4.0; Systems Engineering Concentration

Tribhuvan University, Nepal

September 2016 - April 2021 Bachelor of Engineering, Computer Engineering

- GPA: 3.8/4.0; Academic Excellence Scholarship Recipient

SKILLS

Python | C# | JavaScript/TypeScript | SQL | C++ | .NET Core | Angular | Vue.js | PyTorch | TensorFlow | AWS | Docker | GraphQL | Redis | MongoDB | Git | Linux

PROJECTS

Advanced Watermarking in Stable Diffusion Models December 2024

- Enhanced watermarking robustness in stable diffusion by implementing EDICT over Gaussian Shading, improving detection rates by 2% while maintaining image quality.
- Published research findings [arXiv:2501.08604](https://arxiv.org/abs/2501.08604) and presented at the university symposium.

GPU-Optimized Transformer Implementation November 2024

- Reproduced and validated "E.T.: Re-Thinking Self-Attention for Transformers," achieving 85% of the claimed GPU efficiency gains through optimized CUDA implementations.
- Demonstrated proficiency in high-performance computing and deep learning optimization techniques.