Krishna Panthi
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LinkedIn: linkedin.com/in/krishnapanthi | GitHub: github.com/kp-square

Education

Clemson University, South Carolina - Master of Science in Computer Science Jan 2024 - Dec 2025 (Expected)
Courses: Design and analysis of algorithms, Computer Security Principles, Matrix analysis, Cloud Computing, Parallel Programming, Data Science, ML based image generation, Scientific Visualization

Tribhuvan University, Nepal - Bachelor of Engineering in Computer Engineering Sep 2016 - April 2021

Technical Skills

Languages: Python, C#, C++, SQL, Javascript/Typescript, HTML/CSS
Machine Learning: PyTorch, Tensorflow, Pandas, spaCy, GPT API, Diffusion Models, Darts, CUDA, Gymnasium
Cloud/DevOps: AWS (EC2, S3, Lambda), Azure (Functions, App Service), Docker, Git, Linux
Databases: Relational Databases (MS SQL, MySQL), MongoDB, Redis, Elasticsearch
Miscellaneous: Open MPI, SIMD, IIS, Mixpanel, Angular, Vue.js, GraphQL, Paraview

Experience

Clemson University, South Carolina - Research Assistant Jan 2024 - Present

- Researching deep learning based time series forecasting and reinforcement learning using Python, PyTorch, Darts and Gymnasium.
- Led development of WaterSoftHack (NSF funded Learning and hackathon), coordinating 15 participants to solve water resource challenges.

MutualArt, Israel - Software Engineer Nov 2021 - Dec 2023

- Designed sales and marketing systems using .NET Core, GraphQL, SQL Server, and Vue.js, resulting in an efficient workflow and over 200% improvement in responses and efficiency.
- Migrated ML tools from Python 2 to 3, resolving compatibility issues and improving I/O performance by 50%.
- Developed a prototype NER system using Python, spaCy, and GPT, achieving an accuracy of 95% in identifying key entities in unstructured text data.

PensionPro, Harrisburg, PA - Junior Software Engineer (via Dolphin Dive Technology) Apr 2021 - Jan 2022

- Modernized a large desktop application to a web-based platform using Angular and .NET Core, improving accessibility and user experience for clients.
- Optimized database interactions with Redis caching on Azure, reducing latency by over 25%.

Projects

Watermarking in Stable Diffusion | krishnapanthi.com/projects/gaussian-shading-with-edict/

- Improved watermarking performance in stable diffusion by 2% implementing EDICT over Gaussian Shading.

Optimized Transformer implementation in GPU | krishnapanthi.com/projects/et-transformer-reproduction/

- Reproduced "E.T.: Re-Thinking Self-Attention for Transformers," achieving 85% of the paper's claimed GPU efficiency gains.

Person Tracking and Recognition System | github.com/kp-square/person-tracking

- Developed a system for tracking and recognizing individuals across multiple cameras using Python, YOLOv4, and TensorFlow 2.x.

AI that plays Minesweeper | https://github.com/kp-square/minesweeper-ai

- Modeled the game as a Constraint Satisfaction problem (CSP) and solved it using backtracking.

Conference Presentations

Krishna Panthi, Vidya Samadi, Mostafa Saberian. Flood Gauge Height Prediction Using Advanced Deep Learning Approaches. 12th International Congress on Environmental Modelling and Software, June 2024, East Lansing, MI.