BP Rimal

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EDUCATION

University of Texas at Austin — Aug 2019 – May 2023
B.S. Electrical and Computer Engineering Honors — *GPA: 3.87*
- Published: Researched neuromorphic computing. Spiking Neural Networks on chip.
- Relevant Coursework: High Performance Computing, Multicore Computing, Machine Learning, Stochastic Processes, Number Theory, Linear Algebra

SKILLS

Languages: Python, C++, C, Java, Assembly, Rust, Javascript, Typescript
AI & Machine Learning: PyTorch, TensorFlow, pandas, scikit-learn, sciPy, fine-tuning
Frameworks for High Performance Computing: CUDA, OpenMP, MPI

EXPERIENCE

Visa — June 2023 – Present
Software Engineer — *Austin, TX*
- Developed an internal AI application that utilized historical incident tickets to recommend solutions for new production issues, cutting initial investigation time from 4 hours to just 20 minutes.
- Developed and maintained APIs for B2B payment platform, processing billions in payments annually.
- Troubleshot and resolved production issues, ensuring uptime of 99.999 %.

Apple — May 2022 – Aug 2022
OS/Silicon Engineering Intern — *Austin, TX*
- Developed a Slack app to request, run, and cancel regression tests for *iOS/MacOS/WatchOS* software changes.
- Implemented data caching to detect error-prone host machines and reduce burdens on the test scheduler API.
- Optimized data caching with multithreading which led to a 10x speedup in detection time.

AMD — Jan 2021 – Aug 2021
Product Engineering Intern — *Austin, TX*
- Developed scalable software tools and automation scripts that support testing of server processors and GPUs.
- Validated GPU core power consumption at specific frequencies using Python, saving over *$5 million* per year.

PROJECTS

GenUX.site | *Python, TypeScript, React* — Oct 2023 – Present
- Invented Generative User Interface (GenUI) framework, enabling LLM agents to generate UI components in real time to drive user interactions.
- 15+ agentic apps built using GenUI, deployed across multiple classes with 500 students and achieving 70% weekly active users.

decall.live | *Python, TypeScript, Kubernetes, Docker* — July 2024 – Present
- Developed a low-latency AI Phone Receptionist tailored for Auto Dealerships.
- Designed and deployed scalable backend architecture to handle high-traffic environments.

Drug-Drug Interaction Classification | *Python, PyTorch* — March 2023 – April 2023
- Innovated upon the state-of-the-art model in predicting interaction between drugs.
- Won the best UT Austin Data Science Project award.

Video-Video Translation with Lip Sync | *Python, PyTorch, Transformers* — Jan 2023 – April 2023
- Developed a program to input a video of a speaker in any language, translate it to English in the speaker's voice, and deepfake the video for lip-sync.
- Optimized training for lip-syncing on UT's supercomputer.

HornsRide | *React Native, Node.js, Firebase, Expo* — Jan 2022 – Dec 2022
- Designed and implemented a carpool mobile app exclusively for UT students.
- Developed full stack by implementing API endpoints, a web platform, and mobile app components.

COVID-19 Detection from Chest-X-Ray using PyTorch | *Python, PyTorch* — July 2021 – Aug 2021
- Trained a ResNet-18 model in PyTorch to perform Image classification of Chest X-Rays with 94% accuracy.