Faiz Ansari

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EXPERIENCE

Software Engineer ❯ Filmtools ❯ Burbank, CA   2022 - 2024

- Spearheaded development of a SaaS for on-demand vGPU cloud compute, virtualized by VFIO passthrough of workstation GPUs to QEMU/KVM; orchestrating VM provision using libvirt and IOMMU group configuration, and routing requests via RESTful API stack over Node.js to optimally deliver rendering, ML, and CAD pipelines at the scale of hundreds of concurrent users.
- Implemented infrastructure for TURN-protocol optimized WebRTC live streaming and adaptive bitrate allocation, delivering hi-res browser-based remote post-production editorial services.
- Led a workflow optimization effort by delivering an automated vendor price-sheet parser driven by GenAI via GPT-4 API, expediting data processing to a Flask-based interface for review and scheduling for submission to the NetsSuite database.

Platform Engineer ❯ Sidney Harman Academy ❯ Los Angeles, CA   2021 - 2022

- Streamlined deployment of the Lab's VR/XR collaboratories by establishing a GitHub Actions driven CI/CD pipeline and a multi-scene layered development workflow in the Unity engine.
- Extended content delivery and interactivity of USC's Scalar publishing platform via JavaScript API to meet the requirements of individual articles of authored scholarship.
- Held office hours to provide consultation for custom feature integration to researchers publishing with Scalar.

C++ Developer ❯ Pixerati ❯ Chino Hills, CA   2021

- Developed a C++ Autodesk Maya SDK utility plugin to facilitate real-time procedural generation of mesh objects as a component to a proprietary compositing pipeline.
- Optimally serialized mesh vertices, UVs, and textures into USD for low-latency export and scene generation in Unreal Engine.

Pipeline Support Specialist ❯ Bento Box Entertainment ❯ Burbank, CA   2019 - 2021

- Scaled and troubleshooted distributed rendering queues and server architecture of productions in parallel including: *Bob's Burgers* (Fox), *The Bob's Burgers Movie* (Disney), *Central Park* (Apple), and *The Prince* (HBO)
- Provided technical support and guidance for Toon Boom Harmony, Storyboard Pro, ShotGrid, and the Adobe Creative Suite.
- Expediently transitioned the enterprise network to a secure, VPN-based remote workflow in the advent of COVID-19.

EDUCATION

Master of Science ❯ Artificial Intelligence ❯ University of Southern California   2021 - Hold

- Paused at 16/32 units - took leave to pursue work prospects.

Bachelor of Science ❯ Computer Science ❯ California State University Northridge   2018

PROJECTS

3D Mesh GCN Classifier ❯ Deep Learning + MLOps   2025

- Implemented pipeline to preprocess 3D models as graphs for classification by GCN trained on the ModelNet40 dataset.
- Deployed training and inference models as serverless IaC via Terraform on GCP, routed by FastAPI and tracked by MLFlow.

Q-Learning Atari Breakout ❯ Reinforcement Learning   2022

- Optimized a Markov Decision Process agent for training in TensorFlow to play and solve OpenAI Gym's Atari Breakout.
- Achieved game-winning reward values within 28 training episodes, logging iterations in Jupyter Notebook.

SKILLS

Programming ❯ C++, Python, JavaScript

Machine Learning ❯ Pytorch, MLFlow, Open3D

Graphics ❯ Maya, Unreal Engine, OpenUSD, WebGL

Full Stack ❯ Node.js, Express.js, Socket.io, Flask, SQL, Redis

DevOps ❯ GitHub Actions, Terraform, Nginx, AWS EC2, Lambda

Virtualization ❯ QEMU, KVM, Proxmox, libvirt, Docker, Kubernetes