Faiz Ansari

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EXPERIENCE

Software Engineer - Cloud ❯ Filmtools   2022 - 2024

- Spearheaded the scaling of numerous client-facing services and systems to production, leading the entire development lifecycle – from conceptual research, system design, full-stack development, UX/UI design, testing, deployment, and documentation. Delivered initiatives:
  - ❯ Cloud computation SaaS for low-latency access to high-performance GPU processing; delivering end-user requests over Node.js stack to the REST API backend to handle network-wide VM state management, fulfilling access reliably and securely at scale.
  - ❯ Remote post-production editorial over the cloud, leveraging the open-source framework vdo.ninja and ensuring stream sync via self-deployed Web-RTC TURN protocol and adaptive bitrate allocation. Scripted dependency support for Mac OS and Windows.
  - ❯ Automated inventory database updates via intelligent price-sheet processing. Optimized prompts for OpenAI's GPT-4 API to interpret submissions made to a Flask-based web interface, parsing them into a standardized format for simplified review and scheduling to post to NetSuite.

Lab Staff Developer ❯ Sidney Harman Academy, USC   2021 - 2022

- Drove development of the 3D/VR experiences, *The Path Ahead* and *Bunker Hill VR*, interfacing with multidisciplinary teams. Implemented player control, physics, procedural terrain, volumetric particle effects, NPC AI, and other core mechanics in the Unity engine.
- Extended USC's Scalar publishing platform via JavaScript API to meet the requirements of individual articles of authored scholarship. Held office hours for researchers publishing with Scalar, providing guidance on platform-usage and implementing requested API features.

C++ Developer ❯ Pixerati   2021

- Developed a plugin extension for the Autodesk Maya SDK to enable procedural regeneration of mesh objects within 3D environments. Utilizes Maya's C++ API to optimally serialize the vertices, UV maps, and textures of selected meshes in a scene for export.

IT Specialist ❯ Bento Box Entertainment   2019 - 2021

- Timely resolved support tickets across multiple animation production pipelines, including:
  - ❯ *Bob's Burgers* (Fox), *The Bob's Burgers Movie* (Disney), *Central Park* (Apple), and *The Prince* (HBO).
- Deployed software and admin updates to over 300 machines via bash scripting and Active Directory.

EDUCATION

Master of Science in **Artificial Intelligence** ❯ University of Southern California   On-Hold

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

Bachelor of Science in **Computer Science** ❯ California State University, Northridge   2018

PROJECTS

5×5 Go Minimax Agent ❯ *AI Game-Playing*   2022

- Implemented a heuristic-led Alpha-Beta pruning algorithm to win 5×5 Go versus other intelligent agents.
- Achieved 65% win-rate over publicly available competitive Alpha-Beta agents, and 42% versus Q-learning.

TensorFlow Q-Learning ❯ *Reinforcement Learning*   2021

- Optimized an MDP agent for training under GPU to virtually play and solve OpenAI Gym's Atari Breakout.
- Achieved consistent game-winning reward values within 28 training episodes; logged in Jupyter Notebook.

SKILLS

Programming ❯ Python, JavaScript, C++
Machine Learning ❯ OpenCV, TensorFlow
3D & FX ❯ Unity, Maya, WebGL

Full-Stack ❯ Node.js, Express.js, Vue.js, Socket.io, Flask, SQL, HTML/CSS
DevOps ❯ Docker, Nginx, OAuth, AWS EC2, Lambda
Virtualization ❯ libvirt, Proxmox, KVM