YUSUF WADI

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EDUCATION

University of Texas - Dallas *August '20 - December '23*
Bachelor's, Computer Science
- Courses: Machine Learning, Artificial Intelligence, Data Science Methods, Advanced Algorithms, Computer Architecture, Database Systems, Automata Theory, Digital Logic, Operating Systems, Software Engineering, Unix

Neuromatch Academy *July '24*
Computational Neuroscience
- Completed an intensive 3-week course with Neuromatch Academy, covering cutting-edge advances in machine learning and causality research with state-of-the-art modeling approaches in neuroscience.
- Contributed to a research team working on a project seed provided by an established research project, focusing on methods in integrative research and collaboration.

PROFESSIONAL EXPERIENCE

Seeloz
Data Science Intern *May '24 - Present*
- **Building out SAP data-pipeline in SQL for ETL** tasks and fulfilling client requests, raising revenue by 40%
- Simulating client inventory levels in RLLib framework to optimize finished and unfinished good surplus to boost client FRSD to 90%

Scale AI
Contract Role *October '23 - Present*
- **Building and debugging detailed code and test cases** in order to ensure quality training data for a generative AI model.
- Completed projects in a variety of languages and frameworks, including but not limited to: Python, Java, React/TSX, Swift, SQL, and C++

Monoware Studios
Web Developer *May '22 - August '23*
- **Pioneered a chatbot initiative with Langchain** and GPT-4 in Nuxt.js, and a Pinecone vector store that seamlessly integrates with a PDF backbone, providing efficient assistance and support to clients.
- Proficiently employed CSS and TailwindCSS for styling purposes, enhancing the visual appeal and user experience of the web applications.

PROJECTS & OUTSIDE EXPERIENCE

High Frequency Low Latency Trading Algorithm *March '23/'24*
Research Lead
- **Led the research wing** of a team for the IMC Prosperity competitions to build trading algorithms in Python, landing in the Top 1% of all participants globally.
- **Accelerated algorithmic performance by 9x** through the application of Apache Spark and Hyperopt for parallelizing trials.

End-to-End LLM Backed Therapy Chatbot *August '22 - September '22*
Project Lead
- **Designed and implemented** an end-to-end therapy chatbot integrating a 10MB dataset of therapy transcript data into a GPT(Ada/Babbage) fine-tunable model.
- Constructed a performant web interface in Nuxt.JS hosted on a Linode Cloud server and relayed through Nginx.

Raybender - AI-Powered Virtual Assistant for Digital Productivity *August '23 - December '23*
AI Engineer
- **Utilized contemporary LLMs in a Swift/MacOS environmen**t to develop an AI virtual assistant for natural language interactions with devices.
- Achieved efficient application performance with a 6ms parse time, 66MB of memory, and 0.38 cores on average.

FlowState -BCI Powered Video Playback Controller *October '22 - Present*
Project Lead
- **Designed a BCI application**, computes alpha band of brain to speed up or slow down video based on your conscious attention
- Utilized the Python Lab Streaming Layer API to parse high-frequency brain wave data to perform tasks on a playback engine

RESEARCH

Neural Radiance Field 3D Scene Capture to VR Pipeline Analysis *January '23 - May '23*
Research Lead
- **Evaluated NeRF models** including Mip-Nerf, Nerfacto, and Instant-NGP using NeRF Studio for performance and applicability in immersive environments, highlighting Nerfacto's potential for commercial use with a training time of 9-11 minutes and a model size of 200-400 MB.

Neural Decoding of Joystick Movements from ECoG Data for BCI Systems *July '24*
Research Co-Lead
- **Developed a Brain-Computer Interface (BCI) system** using electrocorticography (ECoG) data to predict joystick cursor trajectories, leveraging advanced machine learning techniques such as Autoencoders and LSTMs.

SKILLS

Languages: C#, C++, Java, Python, PHP, SQL, HTML, XML, Ruby, JavaScript, Verilog, Swift, VBScript
Frameworks: Tensorflow, Keras, Apache Spark, PyTorch, tinygrad, React Native, Vue, Nuxt, Node.js, unitttest, JUnit
Platfrom/Services: iOS/Swift, Android Development, Linux, Docker, Git, WSL, Unity3D, Kali, Nginx, Hadoop, SSMS