HEMANTO BAIRAGI

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SUMMARY

- Software Engineering specializing in Machine Learning, Artificial Intelligence & Python development.
- Transitioned from Physics, to Financial Physics and Engineering to Software Engineering professionally.
- GitHub Link: https://github.com/Orko24
- LinkedIn Link: https://www.linkedin.com/in/hemanto-bairagi-865027101/
- Portfolio Link: https://github.com/Orko24/Portfolio_Hemanto_Bairagi/blob/master/Portfolio.pdf
- Specializes in Python, C/C++, Go / Golang programming languages.

RELEVANT SKILLS TO THE POSITION:

- Knowledge of Windows & Linux, experience in Python & JavaScript. Knowledge of Dockers. Experience using REST API's.
- Understanding of modern software architecture, object-oriented design & software design patterns
- Experience in GO/ Golang development: https://github.com/Orko24/FFMPEG_Golang_replacement
- Bilingualism (Basic French, High English Fluency)
- Excellent problem-solving, critical thinking skills.
- Excellent verbal and communication skills, with adherence to IT policies, support and procedures.
- Software Engineering & Software Development.

EXPERIENCE

Lead Software Engineer and Software Architect — Jan 2022 to present
IBM Startup Partner Program; Adamas Audio:

- Role was to design, develop, produce, deploy code for Adamas Audio. Currently running ongoing postproduction support.
- Code was developed in a test-driven agile environment, where discussions on code implementation, testing and software architecture were facilitated. IBM Cloud support team was heavily involved in web application deployment to resolve any design and coding issues.
- Skills gained: Python, Java, Machine Learning, Artificial Intelligence, Machine Learning Libraries like Keras, PyTorch, Tensorflow, Sci-kit Learn, Pandas, Numpy, etc. API development, Frontend: HTML, CSS, JavaScript, Node.js, ETL software. Programming Languages like: Python, Java, C++, C#, C, Golang, MATLAB, Mathematica, SQL. Site Operation Management, DNS, Domain Transfer, Site Migration, Cloud Computing, Django, Flask, Redis & Celery data development and integration. Linux, Bash Script, Git, GitHub, GitOps, Cryptography, SSL & Cyber Security, Data Analysis & Data Science.
- The site was migrated from Google Cloud to Liquid web to IBM Cloud bare metal traditional servers.
- Service went down April 14th due to cost, have been approved by IBM's partner program and am currently receiving $3000 USD for 6 months in funding starting May 1st.
- Postproduction updates written in Golang, Java and C++ to ensure scalability and patentability when profitable, are being applied. Update and update progress hosted in this GitHub repository: https://github.com/Orko24/FFMPEG_Golang_replacement
- The purpose of Adamas Audio was to allow customers to create custom audiobooks at scale. It is currently hosted at: https://www.adamasaudio.com. Full article detailing it can be found https://adamas-audio.medium.com/adamas-audio-machine-learning-and-web-development-to-produce-cheap-audiobooks-and-voice-cloning-a05608e4485f.
- Frontend components and REST API built using HTML, CSS & JavaScript.
- Backend components built in Python, C++, C#, C, Java, Golang, SQL.
- Data products were built using Machine Learning libraries like: Pytorch, Tensorflow, Keras, Scikit-learn, Pandas, Numpy, etc.

- Adamas Audio was hosted using Apache, Apache server instance templates written in C/C++ are given here: https://github.com/Orko24/Apache_django_ssl_web_integration
- SSL certificates integrated into DNS Apache pipeline, allowing HTTPS technology to encrypt all web traffic to and from the server per API client request.

Quant-connect June 2020 to Jan 2022

Algorithmic Trader June 2020 to Jan 2022

- Made the transition from Physics to Financial Physics and Financial Engineering. Allowed the gaining of experience in Financial Engineering, Software Development and Algorithm Development.
- Algorithms were designed around Industry selection like Technology (Artificial Intelligence and Semiconductors) and Pharmaceuticals.
- Algorithms were developed in Python.
- Machine Learning Libraries like Tensorflow, Keras, SciKit-Learn, were utilized to identify patterns within trading data. This was done to create predictive analytics regarding share and commodity prices.
- The lean trading engine Framework was utilized for live trading and back testing of Algorithms: https://www.lean.io/#topic100.html.
- Tactically short to long term trading signals utilized in conjunction with machine learning models to generate buy/sell signals based on trading signals to generate alpha.

Undergraduate Researcher Sept 2019 to June 2020

University of Calgary

- Utilized C++/C to program an Arduino to track photons emitted from experimental green laser.
- Experience utilizing programming languages like Python, C++, C, Mathematica, and MATLAB in a professional research setting.
- Thesis given in this GitHub repository: https://github.com/Orko24/ODMR_thesis/blob/master/Hemanto_Bairagi_Final_Report_Draft_3%20(1).pdf
- Link verifying research: http://quantumalberta.ca/wp-content/uploads/2020/12/IQST-2020-Report.pdf
- ODMR thesis: Worked on building a building an optically detected magnetic resonance (ODMR) microscope, with the intent of mind to use qubits to produce nanoscale imagery and video.

EDUCATION & TRAINING

Bachelor of Science: Astrophysics
University of Calgary
Calgary, AB
From Sept 2016 to Feb 2021

- Achieved Honors
- Dean's List Honoree [2020]
- GPA: 3.5/4.0

Bachelor of Science: Physics
University of Calgary
From Sept 2016 to Feb 2021

- Achieved Honors
- Dean's List Honoree [2020]
- GPA: 3.5/4.0

REFFERALS CAN BE PROVIDED UPON REQUEST

- https://www.linkedin.com/in/paul-barclay-648a1531/
- https://www.linkedin.com/in/jason-donev-76659922/
- https://www.linkedin.com/in/sstotyn/