Profile of Hongmei Jian Roy

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Hongmei Jian Roy, is a US citizen, her security **clearance is not determined, and she speak two Languages: Mandarin, English.**

Introduction to Hongmei Jian Roy

As an undergraduate student, my academic journey intertwines software engineering and bioengineering, driven by a deep-seated passion for integrating data-driven insights. My studies focus on Artificial Intelligence and Machine Learning, laying a robust foundation for my professional pursuits.

With proficiency in Python development, data engineering, and machine learning, I am eager to contribute my expertise to your team while expanding my knowledge in Django REST framework and backend API development. My certifications from Stanford University in Machine Learning and Deep Learning, coupled with my studies in Generative AI, have provided me with a solid grounding in AI algorithms and techniques. These credentials enable me to seamlessly integrate intelligent systems into contemporary data-driven solutions.

My experience in data architecture and engineering empowers me to design and manage scalable data pipelines, ensuring efficient ingestion and transformation of large datasets across multiple formats. Although I have not yet worked with Django REST framework, I am enthusiastic about learning and mastering it to develop robust APIs that enhance data accessibility and workflow automation. Furthermore, I have sharpened my practical skills through bootcamps focused on PyTorch for Deep Learning and OpenCV for Computer Vision, allowing me to apply ML techniques to signal classification and autonomous decision-making.

I am confident that my problem-solving abilities and strong communication skills will enable me to contribute effectively to teamwork. To further my career as an AI Cloud Engineer, I am committed to mastering the following skills in the near future: AWS, Docker and Kubernetes, CI/CD pipelines, Apache Hadoop and Spark, and MLOps.

Beyond technical expertise, I am passionate about collaboration and continuous learning. I thrive in agile environments where I can translate complex requirements into effective solutions while balancing innovation and efficiency. My strong communication skills allow me to effectively engage with engineers, data scientists, and other stakeholders to drive impactful results.

I would welcome the opportunity to discuss how my skills and enthusiasm for learning can contribute to your team's success.

Hobbies and activities: Beyond the world of tech, I have a few hobbies that keep my life balanced and exciting. I enjoy walking in the mountains and by lakes, as it provides a refreshing break from the screen and a chance to connect with nature. Listening to music and dancing with the flow are integral parts of my life. My interests also extend to fashion, Eastern medicine, and ancient philosophy, which I find endlessly fascinating.

Education, Degree and University information:

Education: Studying Bioengineering with minors in Chemistry at George Mason University, it's a
Bachelor of Science degree. GPA 3.5/4

Education: Studied Information System and Information Management at The China Three Georges University. I received my first bachelor's degree in management.

Programming Languages: Python, Java, R, Power BI, MATLAB.

Skills: Machine Learning, Artificial Intelligence, Data Architecture, Data Engineer.

Technical skills: Python, Java, MATLAB and Simulink, Advanced Relational Database and SQL, Power BI / R, Large Language Model (LLM), Vector Database, Prompt Engineering, Deep Learning models, Pytorch, TensorFlow, Karas, Langchain, RAG, signal processing, neuroscience, biochemistry, nanomaterials and nanofabrication.

List of Certifications including:

IBM Generative AI professional certificate on Coursera;

Deep Learning Specialization certificate from Stanford University on Coursera;

Machine Learning Specialization certificate from Stanford University on Coursera;

Data Engineer in Python from DataCamp;

Machine Learning Scientist with Python from DataCamp;

Medical interpreter professional certificate;

Nano Fabrication certificate from GMU.

Boot Camp includes: Pytorch for Deep Learning from Udemy; OpenCV for Computer Vision from Udemy.

Relevant Coursework includes:

CS 211 Object-Oriented Programming, Chem 314 Organic Chemistry, BIOL 483 Biochemistry, BENG 327 Cellular Neurophysiology, BENG 230 Biomechanics and Transport, BENG 320 Bioengineering Signal &System, BENG 330 Computational Modeling, BENG 350 Neural System Designs, BENG 370 Bioinstrumentation, BENG 415 Biomanufacturing, BENG 521 Tissue Engineering

Research Experience includes:

Research one: Investigating voltage-sensitive biosensor used for neuronal imaging during summer 2024 in GMU.

Research two: Investigating the development of implantable neural microelectrode technology and future research direction during Fall 2024 in GMU.

List of Projects include:

Project one: Detecting Arrhythmia from ECG signals in spring 2023 in GMU

- Use Python and MATLAB to reduce noise from raw ECG signals, filtration, peak detection, heart rate and beating intervals calculation.
- Use Fourier Transfer method to detect abnormality, and Reverse Fourier Transfer method to reconstruct signal, and plot 3D spectrum.

Project two: build AI powered chatbot

- Use LangChain and LLM to construct a chatbot and answer questions from loaded Document.

Project Three: Student Database Management System using Object-Oriented Programming by Java during summer in 2024 in GMU

- Designed a program that allows managing student coursework.

- Program accepts input of students' score in each section and calculates total score according to different weights in sections.
- At the end program output allows student-searching by name and ID, sorting students by score, editing and deleting students' profile.

Work Experience:

Work as a Medical Interpreter in CLAS, responsible to simultaneously interpret between Mandarin and English in hospitals since January in 2023.

My technical skills including:


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    "name": "Large Language Model (LLM)",
    "description": "Designed chatbots and tools to provide insights regarding orders using Prompt Engineering to leverage LLM capabilities."
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