Skills & Projects

Product Development:

Can translate scientific research needs into well-architected, modular software systems.

1. **AI & ML Product Development**
    - Designing AI features with product thinking
    - Applying AI components where they improve workflow efficiency or insight
    - Projects:
        - AI Products
        - V

2. **Tool & Workflow Design**
    - Design tools that simplify complex scientific analyses
    - Transforming research workflows into modular, reusable pipelines
    - System design for computational analysis tools
    - Projects:
        - Data Analysis Tool
        - V

3. **User Centric Interface Design**
    - Translated stakeholder needs into clear technical design decisions
    - Designing UI/UX for scientific applications
    - Projects:
        - Data Analysis Tool
        - Redesigns

4. **Full Product Lifecycle**
    - Functional prototypes, deployed apps, and proof-of-concept tools
    - Projects:
        - Data Analysis Tool

Technical Foundations:

Can apply core tools, languages, and scientific workflows to build robust computational applications.

1. **Bioinformatics**
    - Developed and automate pipelines using **Python, R, Linux/Unix, Perl, Bash** and **Java (**Data Analysis Tool)
    - Experienced with **RNA-Seq** and **Single-Cell Sequencing** analysis workflows
    - Experienced with **TaqMan chemistry and** its design principles
    - ML pipelines for cell morphology (Internship project)

2. **AI & ML Integration**
    - Integrating NLP, ML, and RAG pipelines into analysis tools (Data Analysis Tool , AI Products)

3. **Full Stack App Development**
    - **FastAPI:** modular backend APIs (Data Analysis Tool, V)
    - **Streamlit:** interactive scientific apps (Data Analysis Tool)
    - **React:** responsive frontend interfaces for research tools (V , Redesigns)

4. **Systems & HPC**
    - HPC job scheduling (SLURM/PBS), debugging, performance optimization
    - Linux (RedHat/CentOS) system management
    - C/C++ compilation for scientific software, building binaries

5. **Version Control & Collaboration**
    - Git, Docker