

## Alireza Minagar, MD, MBA, MS (Bioinformatics)

**Software Engineer | Bioinformatics Specialist | AI Technologist | Project Manager**

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🔗 GitHub: <https://github.com/aliminagar>

🔗 Personal website: <https://aliminagar.github.io/neuroAM>

### Summary

Multidisciplinary Software Engineer and Project Manager with strong experience in full-stack development, artificial intelligence, and bioinformatics. Founder of Perfect Strokes LLC. Background spans software engineering, neurology, clinical content design, and scientific writing. 20+ years of leadership in medicine and education. Currently, I am completing an MS in Software Engineering.

### Technical Skills

- **Languages:** Python, Java, JavaScript, SQL
- **Frontend:** React, HTML5, CSS3, Tailwind CSS
- **Backend:** Node.js, Express.js, Flask, Java + Spring
- **Databases:** PostgreSQL, MySQL, MongoDB
- **Cloud & DevOps:** AWS, GCP, Docker, ECS, Fargate, API Gateway, Terraform, GitHub Actions, Netlify
- **Data & AI:** pandas, NumPy, scikit-learn, TensorFlow, Kafka, DeepSeek
- **Tools:** Git, GitHub, Postman, VS Code, Jupyter, Streamlit, CodeMagic
- **Compliance:** HIPAA, GDPR
- **Methodologies:** Agile, Scrum, Kanban

### Certifications

- CompTIA A+ (2025)
- TripleTen Certificate in Software Engineering (2025)
- Postgraduate Certificate in AI/ML – UT Austin (2023)
- **Louisiana State University - Shreveport, 2021-2022** Java Programmer & Python Developer Program

### Key Projects

■ **Amazon Kindle Publishing Program (2023–Present)**

**Role:** Publisher & Content Architect

- Spearheaded the release of multiple educational and medical titles using Amazon Kindle Direct Publishing (KDP).
- Led a remote publishing team focused on science, health, and education content creation.

### **UMGC Software Engineering Capstone (2025)**

**Role:** Project Manager – Multi-Team Software Delivery

- Directed 3 concurrent MS-level teams building real-world applications:
  - FocusEd AI – Intelligent learning platform
  - CareConnect – Healthcare & caregiver coordination app
  - DeepTrain – AI-based simulation system for training
- Oversaw frontend (Dart + Flutter), backend (Java + Spring), and AWS architecture (ECS, Fargate, API Gateway).
- Integrated DeepSeek LLM, Docker, RDS Aurora (MySQL/PostgreSQL), Terraform, and CI/CD via CodeMagic.
- Enforced HIPAA/GDPR compliance and delivered production-ready systems with full documentation.

### **UMGC Bioinformatics Capstone (2023)**

**Role:** Lead Researcher – AI in Cancer Detection

- Developed AI/ML models on synthetic metabolomic data to identify early-stage breast cancer biomarkers.
- Focused on recurrence prediction, metastasis tracking, and personalized treatment optimization.
- Highlighted the transformative potential of metabolomics + AI in cancer detection and care delivery.

### **Other Projects**

- **Bioinformatics Education Platform**  
React, TypeScript, Tailwind – GitHub: [github.com/aliminagar/Bioinformatics\\_2025](https://github.com/aliminagar/Bioinformatics_2025)  
[https://aliminagar.github.io/Bioinformatics\\_2025/](https://aliminagar.github.io/Bioinformatics_2025/)  
Built and deployed an interactive platform covering CRISPR, RNA-seq, and AlphaFold.
- **WTWR – What to Wear?**  
React, Node.js, MongoDB – Link: [alinagarapp.crabdance.com/se\\_project\\_react](http://alinagarapp.crabdance.com/se_project_react)  
Full-stack weather-based clothing recommender app with JWT auth and CI/CD.
- **News Explorer**  
React, Vite, Tailwind – GitHub: [github.com/aliminagar/news-explorer-frontend](https://github.com/aliminagar/news-explorer-frontend)  
Responsive news search SPA with article save feature and simulated login.

- **Physics Education Portal**  
React, Three.js, KaTeX – Link: [aliminagar.github.io/physics-education-portal/](https://aliminagar.github.io/physics-education-portal/)  
3D simulations and math-rendering portal for science education.
- **Product Streaming Pipeline**  
Kafka, Docker, PostgreSQL – GitHub: [github.com/aliminagar/product-streaming-pipeline](https://github.com/aliminagar/product-streaming-pipeline)  
Real-time product event system with analytics dashboard via Streamlit.

## Work Experience

### Perfect Strokes LLC

*Principal Consultant, Software Engineer & Project Manager*  
*Jan 2021 – Present | Remote / Shreveport, LA*

- Designed full-stack applications and medical tools for client delivery.
- Created APIs (Flask/Express) to serve ML models for data classification.
- Led software builds for Gilead, Seattle Genetics, and Wolters Kluwer.
- Coordinated 3–5 concurrent software projects for education, medical care, and scientific data pipelines.

## Education

- **MS, Software Engineering** – University of Maryland Global Campus (2025)
- **MS, Bioinformatics** – University of Maryland Global Campus (2023)
- **MBA** – Louisiana State University (2017)
- **MD** – Tehran University of Medical Sciences (1991)

## Additional Information

- **Languages:** English (Fluent), Persian (Native)
- **Publications:** 20+ peer-reviewed articles in neurology and scientific writing
- **Public Speaking:** Regular presenter in AI, bioinformatics, and medical technology panels
- **Availability:** Open to remote/hybrid positions | U.S. citizen | Willing to relocate