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

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

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- Personal website: https://aliminagar.github.io/neuro-glitch-portfolio/

# **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://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 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 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/3D simulations and math-rendering portal for science education.

### • Product Streaming Pipeline

Kafka, Docker, PostgreSQL – GitHub: 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