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

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

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🔗 GitHub: github.com/aliminagar

🔗 Portfolio: https://github.com/aliminagar/neuro-glitch-portfolio.git

## 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