512-713-9742 | SaMiLMelhem23@gmail.com | samimelhem.com/ | linkedin.com/sami-melhem | github.com/SamiMelhem

EDUCATION

Texas A&M University

Master of Computer Science

• GPA: 4.0.

Texas A&M University

Bachelor of Science in Computer Science, Data Science Emphasis Area, Cybersecurity Minor • GPA: 3.8.

Experience

Momentum Technologies Inc.

R&D/ML Intern

- Building PINNs to optimize metal precipitation in Nickel and Cobalt, using Python and cloud infrastructure.
- Applying Agile and Scrum methodologies in a fast-paced, cross-functional tech environment.
- Collaborating with R&D chemists to translate domain knowledge into effective ML model constraints.

Soft Interaction Lab

Conversational AI Developer

- Developed conversational AI tools used by 500+ SANE nurses, integrating feedback-driven NLP optimization.
- Enhanced user satisfaction metrics by 30% through interactive development and rigorous testing.
- Worked in multidisciplinary teams, mirroring real-world product development cycles.

PitchFact

Data Engineer (Business Operations)

- Built an ML/LLM pipeline processing 500+ PDFs weekly, cutting screening time by 40% for startup evaluation.
- Designed a scoring system with 10+ metrics for startup evaluation accuracy across public and private documents.
- Automated client folder generation, improving interview scheduling efficiency by 25% through workflow optimization.

INTERA Incorporated

Data Science Intern

- Created machine learning models to predict environmental impact, improving model accuracy by 30%
- Streamlined data processing workflows with Python, SQL, and ETL Tools, reducing processing time by 20%.
- Designed interactive **Tableau** dashboards to communicate insights to technical and non-technical audiences.

Projects

SaveGas

- Developed a real-time gas price tracking app with secure authentication and location-based services.
- Optimized API calls for 100+ gas stations, providing seamless user experience on desktop and mobile.
- Integrated cloud-based backend for scalability and reliability.

Exped Browser

- Built an Electron desktop app that can support 10,000+ users across Apple, Windows, and Linux devices.
- Reduced navigation time by 40% using advanced keyboard shortcuts and UI optimizations.
- Implemented local AI-powered summarization for privacy and efficiency.

Autonomous Vehicle Simulation

- Built autonomous vehicles in CARLA simulator, integrating LiDAR/Camera sensors for object detection of 80% accuracy.
- Developed navigation algorithms like (A*, RRT, IDA) with real-time data visualizations in Tableau.
 Implemente ML models (Faster R-CNN, YOLO), using PyTorch, improving navigation precision by 25%.

Panda Express POS System

- Developed a full-stack POS system using React.js, Node.js, and PostgreSQL for role-based access control.
- Integrated real-time weather API for dynamic UI theming and enhanced user experience.
- Reduced cashier processing time by **30%** through responsive design and secure order management.

LEADERSHIP

Carnival of Animals – Vice President

- Managed a **\$2000 budget** and authorized contracts for **50+** performances at churches, weddings, and exclusive venues.
- Organized and led weekly jam sessions for **60** members, fostering musical collaboration and leadership.

TECHNICAL SKILLS

Languages: Python, Java, C++, JavaScript, SQL, HTML, CSS, Go, Rust, R, TypeScript Frameworks: React.js, Node.js, Express.js, Flask, Dash, Django, Spring Boot, Next.js Data Science: Pandas, Scikit-learn, TensorFlow, PyTorch, NumPy, Matplotlib, Plotly, OpenCV, Excel AI/ML: Object-Oriented Programming, Model Optimization, NLP, Multi-Agent Systems, LLM Architecture Tools: Git, Docker, Selenium, Jenkins, Postman, Electron, Jira, Confluence, Vercel, Power BI, Tableau, RESTful APIs, Cursor Databases & Cloud: MySQL, PostgreSQL, NoSQL, AWS, GCP, Azure, Salesforce, Linux, IPFS, Cloud Infrastructure Methodologies: Agile, Scrum, SDLC, CI/CD, Feature Engineering, Data Pipelines, Statistical Modeling, A/B Testing

October 2024 – December 2024

March 2025 – Present

June 2025 – Present

Carrollton, TX

College Station, TX

February 2025 – May 2025

College Station, TX

May 2024 – August 2024

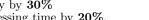
Austin, TX

April 2025 – May 2025

January 2025 – April 2025

August 2024 – December 2024

January 2024 – Present





May 2027 College Station, TX

May 2026 College Station, TX