

# Blake Sonnier

Full Stack AI/ML Engineer

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Lumberton, Texas, 77657, United States

AI/ML Engineer with 7+ years of experience delivering data-driven solutions in healthcare and healthtech. Specializes in deploying deep learning models for diagnostic imaging, real-time patient monitoring, and risk prediction systems. Proven ability to bridge clinical insight with scalable AI systems using Python, PyTorch, and cloud-native technologies.

## Work Experience

### Full Stack AI/ML Engineer

Feb 2022 - Present

[Invene](#) | McKinney, TX

- Led the development of a real-time EEG stress/fatigue detection model deployed in ICU monitoring devices, achieving >90% precision and <200ms inference latency using quantized ONNX models.
- Built a deep learning segmentation pipeline for brain MRI scans using U-Net, reducing manual annotation time by radiologists at NeuroCare clinics.
- Engineered an edge deployment system for cognitive state models on embedded Linux ICU hardware using Docker and PyTorch optimizations.
- Developed clinician-facing dashboards using Plotly Dash to visualize EEG waveform states and segmentation masks for assisted diagnosis.

### AI/ML Engineer

Oct 2020 - Jan 2022

[Axxess Technology Solutions](#) | Dallas, TX

- Built an NLP-based email triage system using fine-tuned BERT models to auto-classify support inquiries, saving 30+ hours/week in manual review.
- Developed a model explainability layer using SHAP and LIME for SMB loan default predictions, aiding compliance and analyst transparency.
- Deployed scalable ML pipelines on GCP with FastAPI and Docker, supporting continuous retraining to adapt to data drift in financial health analytics.
- Collaborated with operations and support teams to integrate AI tools into production workflows with minimal latency overhead.

### Software Engineer

Jun 2018 - Sep 2020

[Iodine Software](#) | Austin, TX

- Built an ETA prediction engine using historical delivery and GPS data, reducing ETA error from 30min to <10min through hybrid ML + ruleset approach.
- Developed LSTM-based truck demand forecast model for regional logistics, improving fleet utilization by 18%.
- Integrated ML systems into Node.js-based dashboards and automated inference pipelines using AWS Lambda.

## Education

### University of Texas at Austin

Aug 2016 - May 2018

Master of Science Computer Science

### LAMAR UNIVERSITY

Aug 2012 - May 2016

Bachelor of Science Computer Science