

William C. Loe

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Software Engineer with scalable cloud, ML pipeline, and LLM app experience; patent holder with distributed systems

EDUCATION

University of Maryland	Expected May 2026
M.S., Applied Machine Learning GPA: 3.89 Phi Kappa Phi Honor Society	
Texas A&M University-Corpus Christi	December 2020
B.S., Computer Science Minor: Mathematics	

SKILLS

ML Frameworks: PyTorch, TensorFlow, Hugging Face, Scikit-learn, XGBoost, LightGBM, Optuna
ML Techniques: Fine-tuning, Embeddings, RAG, Prompt Engineering, Class Imbalance Handling
MLOps & Tools: Docker, MLflow, Weights & Biases, AWS (Lambda, ECS, S3, Glue), SQL, Redis, REST/gRPC, Git, Linux

WORK EXPERIENCE

Software Engineering Intern Inovalon - Bowie, MD	June 2025 - August 2025
<ul style="list-style-type: none">Developed a full-stack, multi-cloud platform with FastAPI, PostgreSQL, Redis, and AWS (ECS, Lambda) to track 2M+ cloud assets, enabling real-time ingestion and normalizationIntegrated Isolation Forest for production anomaly detection, powering real-time risk flagging and automated dashboard insights (~60% precision)Designed a modular, cloud-native platform with feature parity to a \$200K/year SaaS solution, reducing projected annual costs by 85%Automated model retraining pipeline with feedback loops and Optuna for hyperparameter tuning, boosting precision 12% and reducing manual tuning 30%	
Software Engineer II - Platform Aruze Gaming Global - Las Vegas, NV	June 2021 - March 2024
<ul style="list-style-type: none">Designed and shipped the patented Table Poker Progressive System, securing over 150 orders and generating multi-million-dollar revenue within three monthsOptimized hardware-software integration for a casino-grade IoT system, leveraging telemetry and memory profiling for Raspberry Pi, Arduino, and Teensy; reduced crashes 60% and raised uptime to 99.2%Implemented modular platform components with C++ and gRPC, supporting HHR, Class II, and CDS via a plug-in math engine; standardized interfaces to accelerate new-game releases and cut integration time 35%	

TECHNICAL PROJECTS

Fishnet AI Indonesia National Research and Innovation Agency (BRIN)	May 2025 - Present
<ul style="list-style-type: none">Built a machine learning pipeline for fishing and activity classification with 120,000+ AIS records and 100+ GB satellite dataTrained LightGBM and XGBoost models with Optuna for hyperparameter tuning, spatiotemporal features, and class-imbalance handlingAchieved 68% accuracy (AUC 0.71) on presence detection and 62% precision on activity type	
PresenTuneAI OpenAI Hackathon	August 2025 - September 2025
<ul style="list-style-type: none">Created a 4,700-pair/33 GB corpus with OCR and LLM cleanup (Groq, GPT-OSS-20B)LoRA-tuned GPT-OSS-20B with PyTorch (FP16/MXFP4): 95% JSON schema adherence and 75% fewer editsDeployed multi-agent tool calling for automated content and media generation, with production inference and PPTX/PDF export	
SkillMatchAI Hackathon Project	April 2025
<ul style="list-style-type: none">Deployed a Generative AI career assistant (Gemini API, Pinecone), achieving 74% top 5 job-match accuracyEngineered an embedding-based retrieval pipeline for real-time matching 50,000+ jobs and 3,000+ profilesIntegrated CI/CD pipeline and unit tests for FastAPI and ML services, reducing deployment issues by 60%	

PATENT

US 2024/0046760 A1 - Progressive Poker Jackpot System (published Feb 8, 2024; filed Aug 5, 2022)