

KAIJI FU

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EDUCATION

University of North Carolina at Chapel Hill	May 2027
B.S. Computer Science and Mathematics GPA: 4.0 Carolina Scholar (full scholarship, top 1%) Honors College (top 10%)	

EXPERIENCE

Software Engineering Intern, Full Stack (IoT/AI) - Splunk	Jun 2025 – Aug 2025
• Worked on the IoT platform, enabling 1,000+ B2B clients to stream data into Splunk and deploy AI models at the edge	
• Automated performance testing of an embedded Linux device using Python, accelerating development cycles by 3x	
• Implemented i18n using Redux, TypeScript, and React, enabling global expansion and unlocking \$100M+ in revenue	
• Developed systems to enable observability and created dashboards to monitor millions of devices using Python/Flask	
Software Engineering Intern, Full Stack (AI/ML) - Ember Learning	May 2024 – Aug 2024
• Delivered a LLM grading feature with 100k+ users at an AI education startup, helping generate \$40k+ in ARR	
• Built 20+ responsive UI components using TypeScript and React and composed an AWS backend with Terraform	
• Refined fine-tuning pipelines for custom LLMs, improving grading accuracy across diverse standards by up to 60%	
Software Engineer, Open Source - Mozilla	Dec 2023 – Present
• Contributed to Mozilla's bugbug, a Python bug classification system that uses ML to triage 10k+ Firefox bugs/month	
• Resolved critical issues, merging 2000+ lines of code over 20+ pull requests in collaboration with core maintainers	
Research Assistant (AI/ML) - UNC School of Medicine	Nov 2024 – Present
• Collaborated with cardiologists to develop transformer architectures to analyze ECGs and detect cardiac anomalies	
• Used Python and Tensorflow on a SLURM/Linux environment to achieve 11% higher accuracy than state of the art	
Research Assistant (AI/ML) - ECU School of Medicine	Sept 2022 – Feb 2023
• Researched how federated (distributed) machine learning enhances patient privacy when training diagnostic models	
• Demonstrated that federated modeling maintains 95%+ accuracy while obviating cross-institutional data sharing	
• Won Best Poster at the ISS Symposium, where I presented findings to faculty, industry partners, and fellow researchers	

PROJECTS

Nolyn IoT, FreeRTOS, C/C++, TypeScript, React, embedded development	May 2023 – Dec 2024
• Founded a startup that built a camera to capture license plates of vehicles illegally passing buses for 100x lower cost	
• Developed microcontroller firmware with C/RTOS and connected it to AWS for real-time image capture and analysis	
• Created a full-stack cloud application with Python on AWS and a ReactJS admin portal for full operational visibility	
• Deployed on 2000+ buses across 10+ school districts and secured \$1k+ in venture capital from investors like Amazon	
Blackbeard AI/ML, computer vision, PyTorch, autonomous vehicles, robotics	Aug 2022 – May 2023
• Trained an AI object detection model with OpenCV/PyTorch to 4x self-driving performance in a robotics competition	
• Deployed the model on an embedded Linux coprocessor, achieving 95% accurate real-time detection of field elements	
• Employed MQTT with C++ and Java for reliable coprocessor-controller communication, reducing latency to <0.1s	
72o Python, AI/ML, Numpy, Pandas, Machine Learning, Game Theory	Feb 2025
• Awarded 1st/112 in the UNC Pokerbots competition with a team of 4, building a poker decision engine with Python	
• Applied counterfactual regret minimization (CFR) algorithms to develop game-theory optimal betting strategies	
• Designed an opponent modeling system capable of adapting to villain's play patterns, increasing winrate by 32%	
• Leveraged multi-threading to parallelize decision-making, decreasing latency by 3x and avoiding disqualification	
Loggerhead Swift, AWS, PostgreSQL, iOS development, RESTful APIs	Jan. 2021 – Feb. 2024
• Developed a full-stack iOS application in Swift with 10+ users to track and analyze tennis practice sessions	
• Designed and produced a RESTful API using AWS Lambda and API Gateway to store and retrieve user data	
• Defined a robust data model with PostgreSQL for tracking practice metrics, ball machine settings, and analytics	
• Produced progress visualization with SwiftUI, helping users track improvement through data-driven insights	

TECHNICAL SKILLS

Languages: Swift, Python, JavaScript, TypeScript, C++, C, Go/Golang, Java, HTML, CSS, SQL, PHP, Ruby, Clojure
Developer Tools: Node.js, PostgreSQL, MySQL, Docker, Kubernetes, Git, RESTful APIs, Hadoop, AI/ML, TensorFlow
Frameworks: iOS, SwiftUI, RTOS, embedded development, React, AI/ML, PyTorch, IoT, cloud computing, AWS, GCP