TYLER KLEIN

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PROFESSIONAL SUMMARY

Full-stack software engineer and U.S. Air Force veteran with deep experience spanning C#/.NET, React, SQL Server, and systems engineering. Built and shipped production systems for public safety and fintech, and developed Unreal Engine multiplayer games in C++ with real-time networking. Prior military background includes operating and maintaining mission-critical SATCOM, VPN/LAN/WAN networks, teleport/STEP gateway systems, and leading teams in high-pressure, high-availability environments.

CORE COMPETENCIES

- Full-stack development: C#/.NET Core, React, JavaScript/TypeScript, HTML/CSS, REST APIs
- Data: SQL Server, T-SQL stored procedures, schema design, query optimization, ERD modeling
- Security & identity: OAuth 2.0, JWT, role-based access control (RBAC), secure communications concepts
- Real-time systems: messaging/notifications/video features, event-driven UI, low-latency networking
- Game engineering: Unreal Engine 4.27/5.x, C++ gameplay systems, replication/netcode, physics & collision
- ML/signal processing prototyping: Python pipelines, FFT/MFCC/RMS features, scikit-learn classifiers
- Systems & networking: SATCOM, RF theory, troubleshooting, IDS concepts, backup/recovery protocols
- Leadership: team lead/supervision, stakeholder management, Agile/Scrum collaboration, code reviews

TECHNICAL SKILLS

- Languages: C#, C++, JavaScript, TypeScript, SQL/T-SQL, Python, Java, PowerShell/CMD scripting
- Frameworks/Libraries: .NET Core, React, Formik, Yup, scikit-learn, NumPy, SciPy, librosa
- Databases/Tools: SQL Server, SSMS, Postman, Git/GitHub, Visual Studio/VS Code, Trello/Agile boards
- Game/Graphics: Unreal Engine 4.27/5.x, Online Subsystem (Steam), SDL2, OpenGL, Blender, Photoshop
- RF/SATCOM: AN/FRC-181, AN/GSC-52, HPAs/ACUs, modems (TDMA/FDMA), spectrum analyzers, oscilloscopes

PROFESSIONAL EXPERIENCE

ML Systems Intern, *Analog Devices Inc.*
Jan 2026 – Present, Los Angeles, CA
- Designed an ML-enabled detection system for an EM silicon wafer track cart platform (up to $250K per cart load) to prevent part-loss failures and reduce downtime risk.
- Led a structured Failure Modes & Effects Analysis (FMEA) to identify high-risk failure points; produced 4 concept designs and evaluated tradeoffs using a decision/spider matrix for stakeholder review and approval.

- Finalized end-to-end design and authored the Bill of Materials (BOM), coordinating requirements across mechanical + software constraints.
- Created an Agile sprint plan and ownership breakdown for a cross-functional intern team (3 CS interns, 2 ME interns) to deliver milestones on schedule.
- Modeled and designed three custom mounting brackets in Fusion 360 to integrate acoustic sensors onto the cart system.
- Built the data capture workflow integrating barcode scanner + microcontroller trigger, collecting sensor readings, aggregating signals, and persisting datasets for downstream training.
- Developed a Python ML pipeline to train a model on collected acoustic signatures and classify cart health from sensor patterns.
- Implemented Python decision logic to convert model outputs into actionable maintenance signals and reporting for technicians.
- Set up a CI/CD pipeline to automate testing and deployment of the data/ML codebase and improve iteration speed across the team.

Skills: *Python, Signal Processing (FFT/MFCC/RMS), Machine Learning (scikit-learn), Acoustic Data Collection, Feature Engineering, Experimental Design, Data Modeling (ERD), Fault Detection, Trello/Agile*

CTO & Founder, *SirMrTyler Tech Solutions LLC*   *Client: Southern Oregon Public Safety Chaplains*
Sep 2024 – Dec 2025
- Architected and delivered a 6-county public safety chaplain/first-responder platform from ground zero, including user management, real-time messaging/notifications/video, media handling, and incident reporting.
- Implemented OAuth 2.0 + JWT authentication and Role Based Access Control (RBAC) policies to prevent unauthorized access and reduce invalid access attempts.
- Built cross-platform sign-in (Google/Apple/Android) for mobile/web, reducing failed authentication attempts.
- Developed real-time communications features (Instant Messaging, Read Receipts, Group Chats, Voice/Video Calling) that reduced emergency response times by ~40% across 30+ chaplains/first responders.
- Designed a modular .NET Core backend and optimized SQL queries for availability and scaling to additional agencies; delivered mobile-friendly React UI components for field use.
- Owned end-to-end project management: requirements gathering, contract/client communication, deployment planning, on-time delivery, and budget adherence.

Skills: *C#/.NET Core, SQL Server, React, Typescript, Authentication, Role-Based Access Control (RBAC), RESTful APIs, Cross-Platform Mobile Development (iOS/Android), System Architecture, CI/CD Pipeline, Agile*

Full Stack Software Engineer *MoneFi Financial Technologies*
Jan 2023 – Jan 2024, Los Angeles, CA
- Developed an Educational Hub knowledge-base database in SQL/T-SQL (schema + stored procedures) for paginated course lists, lectures, notes, and filters by subject/type/access; improved query latency by ~35%.
- Built and validated C#/.NET Core REST APIs for Blog/content services using Postman, supporting high-traffic usage (reported 1M+ monthly transactions) with 99.9% uptime.
- Designed React UI workflows (test-taking/admin) using Formik forms and Yup validation; improved form processing speed by ~50% and increased input accuracy.
- Implemented role-based routing/authorization across UI and APIs to prevent unauthorized access and streamline admin vs user experiences.

- Refactored core modules using OOP principles to improve maintainability, scalability, and API response times.
- Led Git/GitHub workflows and peer code reviews in an Agile Scrum environment (40+ developer team), improving merge quality and reducing regressions.

Skills: *C#/.NET Core, SQL Server, React, RESTful API Development, SQL/T-SQL Stored Procedures, Database Optimization, Agile Scrum Methodology, Git Version Control, Object-Oriented Programming (OOP), High-Traffic Web Applications*

Server (Part-time) | *Mo's Seafood & Chowder*
Jun 2024 – Present, Florence, OR

- Worked 20-30 hours/week while completing computer science coursework; maintained fast-paced customer service and team coordination.
- Built a lightweight internal seating-chart web app to replace a manual dry-erase process; reduced seating conflicts from ~14+/day to ~0.5/day.

Skills: *React, Customer-facing problem solving, Communication & Teamwork, Time Management*

Game Engineer | *Self-Employed / Freelance* | Morgan Hill, CA   Jan 2019 - Present

- Created 3D physics-based interactive prototypes and downloadable games using C++/Unreal Engine and Java; emphasized memory management, encapsulation, and scalable code architecture.
- Developed multiplayer gameplay systems using Unreal Engine replication/netcode, including projectile mathematics, collision detection, input/output handling, and server-client state synchronization.
- Built a third-person multiplayer shooter with a reusable multiplayer C++ plugin leveraging UE Online Subsystem (Steam API) for low-latency connectivity; implemented combat mechanics, weapons, HUD, animations, and game modes.
- Created 'Toon Tanks' split-screen combat game using UE5 and Blender with custom projectiles, tank vehicle controls, game modes, and animation systems.
- Produced 3D assets and rigs in Blender; implemented inverse-kinematics and UI animation workflows for game interfaces.

Skills: *C++/Unreal Engine 4/5, Multiplayer Networking & Replication, Steam Online Subsystem, Gameplay Systems, Physics & Collision, Plugin Development, UI/HUD, Blender 3D, Git Version Control*

Electrical Repair Technician *uBreakiFix*
Sep 2012 – Aug 2018, Fremont, CA

- Performed diagnosis and repair on 1,000-2,000+ devices (phones, computers, drones, consoles) using multimeters, soldering, circuit/block replacement, and corrosion treatment.
- Delivered warranty-quality repairs meeting Fortune 500 compliance standards (HP, Samsung, Apple, Google).
- Communicated directly with customers to explain issues, repair plans, timelines, and costs; reinforced customer trust and repeat business.

Skills: *Microelectronics Repair, Diagnostics & Troubleshooting, Soldering, Multimeter/Bench Tools, Component Replacement, ESD Safety, Warranty/Quality Compliance, Customer Service*

Radio Frequency SATCOM Technician *United States Air Force*
Sep 2012 – Aug 2018, European/African Theatre

- Led SATCOM/RF teams maintaining 98-99.9% network uptime across 25+ satellite links supporting 800+ users (including presidential/NC3 support) across Europe, Africa, and Southwest Asia.
- Operated and maintained AF teleport/STEP-enabled gateway systems and Global Information Grid assets valued at ~$60M; supported Nuclear C2/NC3 and Missile Defense Agency communications.
- Developed and implemented communications solutions enabling DISN/DoDIN access to 18 bases across 9 nations; managed $42M in satellite terminals (including Navy Multiband Terminals) and EUCOM NC3 assets.
- Executed preventive maintenance inspections across 362+ system components (AN/FRC-181, AN/GSC-52, modems, HPAs, LNAs, converters, waveguides, ACUs); served as SME for HPA and antenna control/tracking subsystems.
- Resolved mission-impacting outages including CENTCOM VPN restoration by reconfiguring a faulted modem in under 1 hour and re-routing satellite channels to reinstate command authority operations across four networks.
- Maintained and enforced DISA documentation/standards; managed Authorized Service Interruption (ASI), Satellite Access Requests (SAR), Gateway Access Requests (GAR), TSR workflows, and Master Station Log (MSL) history.
- Maintained security practices for PL-1 facilities, supported IDS concepts and secure data backup/recovery protocols, and performed annual crypto/communications actions supporting joint services.

Skills: *SATCOM Operations, RF Troubleshooting, Teleport/STEP Gateway Systems, Modems (TDMA/FDMA), Antenna Control Units (ACU), High Power Amplifiers (HPA), Preventive Maintenance, DISA Documentation/Standards, Secure Communications*

Joint Network Control Center Watch Officer (Combined Joint Task Force – Horn of Africa)
- Monitored 50+ satellite circuits and strategic services for ~1,500 users across Africa, Southwest Asia, and Europe; provided timely outage reporting, restoral coordination, and event briefings.
- Briefed senior officers (O-6 to O-9) and GS-11 to GS-14 civilians on outages, authorized interruptions, and significant AOR events; coordinated maintenance requests and restoral actions.
- I received the Joint Service Achievement Medal for exceptionally meritorious achievement supporting humanitarian and civil affairs missions across East Africa.

Skills: *Network Operations & Monitoring, Incident Response, Outage Reporting/Restoral Coordination, Executive Briefings, Cross-Team Coordination, Mission Reporting, Leadership*

Facility Supply Point Officer (Additional Duty)
- Managed 1,500+ satellite, computer, telephone, server, TMDE, and PPE spare parts; maintained inventories and master lists supporting a PL-1 satellite facility.
- Tracked and safeguarded high-value inventories ranging from $500K+ in parts to $53M+ in facility systems components, ensuring readiness and preventive maintenance of stored equipment.

Skills: *Inventory & Asset Management, Logistics/Supply Chain, High-Value Accountability, Documentation & Master Lists, TMDE/PPE Tracking, Readiness Support*

SELECT PROJECTS

- Public Safety Platform (SirMrTyler Tech Solutions): 6-county chaplain/responder web app with RBAC, cross-platform auth, real-time messaging/notifications/video, and incident reporting.
- Multiplayer Shooter (Unreal Engine): reusable C++ multiplayer plugin; Steam Online Subsystem integration; replicated weapons/combat systems and HUD.
- Educational Hub (MoneFi): SQL/T-SQL knowledge-base + React UI with paginated lists, filters, and Formik/Yup validation.

- Restaurant Seating Chart App (Mo's): internal React web tool that reduced seating conflicts and improved coordination during high volume service.
- Acoustic Health Monitoring Prototype (Analog Devices): Python signal processing + ML baseline classifiers for fault detection and localization.

EDUCATION

- Oregon State University - B.S. Computer Science / Cyber Security (Expected Jun 2027)
- Lane Community College - Associate of Science Oregon Transfer, Computer Science (ASOT) (Jun 2025)
- Community College of the Air Force - Associate of Science, Electronics Systems Technology (Jun 2018)

CERTIFICATIONS & CLEARANCES

- CompTIA Network+ (Expired)
- CPR / First Aid / AED (American Red Cross certification reported)
- Udemy/GameDev.tv: Unreal Engine 5 C++ Developer; UE5 C++ Multiplayer Shooter; Unreal C++ Multiplayer Master (Intermediate Game Development)
- Secret Security Clearance (expired 2022)

HONORS & AWARDS

- Joint Service Achievement Medal (Secretary of Defense) - for exceptionally meritorious achievement as JNCC Watch Officer, CJTF-HOA (Jan-Jul 2017).

VOLUNTEER & COMMUNITY

Physical Training Leader / Wellness Coach

- Wellness Coach / Physical Trainer, YMCA (Morgan Hill, CA): Conducted 200+ wellness sessions, taught safe equipment use/cleaning, led weekly TRX group class for ~30 members, and trained 10+ personal training clients.
- Physical Training Leader, USAF (Ramstein AB, Germany): Developed and led daily fitness programs for ~80 members achieving 98% pass rate; created individualized fitness and diet plans that turned 4 failures into zero within 5 months; supported a Special Olympics athlete who placed 2nd in javelin and 400m events.
- Canned Food Drive Leader, Restoration Worship Center (Bandon, OR) (Jun 2010 - Sep 2012): Distributed ~8,000-9,000 food items; led events as needed.
- Special Olympics Sponsor, Keesler AFB (Biloxi, MS) (Feb 2013): Hosted and supported an athlete for a day-in-the-life experience and events participation.