

# Brian Gung

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## PROFESSIONAL EXPERIENCE

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### COLLINS AEROSPACE

#### Senior Software Engineer

Houston, TX

11/2018-Present

Modernized defense-critical and commercial aviation systems by architecting end-to-end cloud-native software across C#/.NET, AWS, and modern JavaScript frameworks.

- Led **OpsCore's monolithic-to-microservices** migration. Chose **EKS** over **ECS** for **Istio** service mesh to enable gradual canary rollouts across **20+** global airline customers with zero operational downtime.
- Re-architected real-time aircraft **APIs**. Adopted **gRPC** over **REST** for efficient bi-directional streaming, reducing **P99** latency by 5x and sustaining 10k+ concurrent defense clients during peak missions.
- Refactored **Angular/React** dashboards for mission operators. Implemented **WebSockets** with centralized state management (NgRx/Redux) to deliver smooth, lag-free interactions for **500+** concurrent users across complex data views.
- Instrumented **Kubernetes HPA** with custom **CloudWatch** metrics. Maintained **99.99%** uptime across 50+ production services by enabling the cluster to automatically absorb 10x traffic spikes without manual intervention.
- Automated schema rollouts via **EF Core** migrations integrated into **CI/CD**. Cut production deployment time from 45 minutes to under 3 minutes and eliminated manual DBA intervention for routine changes.
- Took initiative as the sole **C#/.NET SME** to unblock 3 adjacent squads, defining shared API contracts and reusable **NuGet** packages that accelerated cross-team feature delivery by multiple weeks.
- Mentored 4 junior engineers through structured code reviews and **SOLID** training, driving measurable improvements in team velocity and raising overall code quality standards across the Richardson office.
- Modernized 50k+ lines of legacy Java to C# .NET 6. Applied **DDD/TDD** to decouple tightly-bound business logic, reducing batch job runtime by 40% and eliminating 120+ security findings flagged by Fortify.
- Built a unified **C#/WPF** dashboard integrating 15+ disparate radio modules. Chose desktop over web to meet sub-10ms serial **I/O** constraints, significantly reducing operator workload per shift through streamlined workflows.
- Provisioned all **AWS** infrastructure via **Terraform** (over **CloudFormation**) for state management and multi-cloud flexibility. Slashed environment spin-up from 3 days to under 2 hours, enabling 4x more frequent test deployments.

### TELLABS

#### Software Engineer

Austin, TX

08/2015-10/2018

Full-Stack Software Engineer building network management solutions for enterprise optical LAN products. Delivered C#/.NET backend services, Angular web portals, and diagnostic tools that enabled remote provisioning and real-time monitoring

- Built **C#/.NET** backend services for **Tellabs' Optical LAN** network management platform, enabling centralized provisioning and monitoring of 1,000+ enterprise fiber nodes across 50+ customer deployments.
- Developed an Angular-based web portal for network administrators to configure and deploy passive optical LAN equipment, reducing initial site provisioning time from 2 days to under 4 hours per deployment.
- Engineered a real-time alerting subsystem using C# and **SignalR** that aggregated fault data from 10,000+ optical network terminals (ONTs), enabling NOC operators to detect and resolve outages 60% faster.

- Designed **RESTful APIs** in **ASP.NET Web API** to bridge legacy **TDM**-based network elements with modern IP-based management systems, eliminating manual data entry for 500+ field technicians.
- Optimized complex **SQL Server** stored procedures and queries powering the network inventory system, reducing report generation time from 8 minutes to under 30 seconds for 200+ concurrent users.
- Championed the team's adoption of **Git** and automated build pipelines (**Jenkins**) over manual SVN-based deployments, cutting release cycle time from bi-weekly to on-demand daily builds.
- Developed a WPF desktop diagnostics tool for field engineers to remotely test and troubleshoot ONT connectivity, reducing average truck roll frequency by 25% through proactive issue identification.

## EDUCATION

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THE UNIVERSITY OF TEXAS AT DALLAS  
*Bachelor of Science (B.S.), Computer Science*

Austin, TX  
 2010-2015

## TECHNICAL SKILLS

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- **Programming Languages:** C#, JavaScript, TypeScript, Java (Legacy), Python (Scripting/Automation), HTML, CSS, Shell/Bash
- **Frameworks & Libraries:** .NET 6/8 (ASP.NET Core), Entity Framework Core, Angular 13+, React.js, Redux/NgRx, Windows Presentation Foundation (WPF), gRPC, REST/WebAPI, SignalR
- **Cloud & Infrastructure:** AWS (EKS, ECS/Fargate, EC2, RDS, S3, Lambda, API Gateway, VPC, IAM, CloudWatch, CodePipeline, Cognito, SQS, SNS), Docker, Kubernetes (Istio), Terraform, CloudFormation
- **Data & Streaming:** SQL Server, PostgreSQL, DynamoDB, Redis (ElastiCache), Apache Kafka, AWS S3 (Parquet/CSV), Entity Framework Migrations
- **Frontend & UI:** Angular, React, TypeScript, JavaScript, RxJS, WebSockets, REST APIs, PrimeNG, Material Design, Chart.js, D3.js
- **DevOps & CI/CD:** AWS CodePipeline/CodeBuild, Jenkins, Git (GitHub/GitLab), CI/CD Pipelines, Infrastructure as Code (IaC), Docker Compose, Canary/Blue-Green Deployments
- **Testing & Quality:** xUnit, NUnit, Moq, SpecFlow (BDD), Selenium, Cypress, TestContainers, SonarQube, TDD/BDD
- **AI/ML & Automation:** LLM Context Engineering, AI Coding Agents (Minions), Feature Engineering Pipelines, Model Inference Optimization, Prompt Engineering, Chat Agent, Open AI
- **Security & Compliance:** NIST 800-171, CMMC, OWASP Top 10, TLS/mTLS, AWS KMS (Encryption), IAM/RBAC, SAST (Fortify), DoD Secret/TS-SCI Environment Compliance
- **Project Management & Tools:** JIRA, Shortcut (Stripe's internal tool), Confluence, Slack API Integration
- **Operating Systems:** Linux, macOS, Windows, Android, iOS (Simulator/Device)