

# Dean Kusler

Pflugerville, TX, USA  
✉ [dean@deancode.com](mailto:dean@deancode.com)  
🌐 [deancode.com](https://deancode.com)  
in [deankus](#)

---

## Summary

Senior software engineer with 20+ years of experience building scalable systems and leading technical initiatives across gaming, bioinformatics, and cloud infrastructure domains.

Proven track record of delivering high-impact solutions that balance rapid iteration with long-term sustainability.

Expert in technical architecture, DevOps automation, and optimization, with extensive remote work and cross-functional distributed team collaboration experience.

Trusted technical leader with demonstrated ability to mentor teams, design mission-critical systems, and maintain privileged access to sensitive forensic and medical data systems.

---

## Employment

- Sept 2022 – Apr 2025 **descendantsDNA**, Technical Director / Lead Backend Engineer (Contract), Remote
- Architected and implemented complete backend infrastructure for medical DNA analysis startup, serving as fractional technical director.
  - Designed GraphQL API server using Rust with data in PostgreSQL and S3, supporting real-time genomic data processing and medical report generation.
  - Improved AWS resource efficiency through storage, compute, and lifecycle optimizations following a platform-wide review.
  - Mentored and collaborated with cross-functional team including bioinformatics experts, designers, and front-end developers to deliver production-ready platform.
  - Automated genomic data processing pipelines and medical report generation workflows using AWS services and Terraform infrastructure as code.
  - Maintained administrator-level access to all company systems with demonstrated security and privacy practices for medical data handling.

Sept 2019 – Feb 2025 **Othram Inc.**, Principal Engineer, Remote

- Led technical architecture and implementation for DNA analysis platform helping solve cold cases and missing persons cases.
- Built DNASolves web platform enabling case crowdfunding and volunteer DNA contributions as well as internal sample management and analysis.
- Designed and implemented scalable DNA processing pipelines using Nextflow and AWS Batch, enabling distributed analysis of large genomic datasets.
- Implemented high-performance 1-on-1 DNA comparison system performing millions of comparisons for comprehensive database matching and kinship analysis.
- Managed complete AWS infrastructure using Terraform with trusted administrator access to sensitive forensic data systems.
- Maintained critical systems in part-time capacity (2022-09 to 2025-02) while supporting company's continued growth.

Mar 2015 – Sept 2019 **Bethesda Game Studios (formerly BattleCry Studios)**, Senior Tools Engineer, Austin, TX

- Architected and implemented distributed TeamCity-based build system supporting Fallout 76 development across 4 studio locations (Austin, Rockville, Dallas, Montreal).
- Designed custom version control system for a legacy flat-file database, enabling distributed content development and branching/merging of game data for live service development. This included the first use of the Rust language at Bethesda for parsing and serialization.
- Developed distributed build caching and deployment tools using C#, PowerShell, and Python, reducing build sync times across all studio locations and streamlining developer workflows. Remote command-and-control of developer workstations was also implemented to allow for remote debugging and support.
- Served as primary technical resource for internationalization efforts, coordinating with the translation team and production to ensure timely and accurate localization.
- Contributed to DOOM multiplayer DLC development and provided on-call support for production systems.

Aug 2013 – Mar 2015 **Gene by Gene**, Lead Software Engineer, Houston, TX

- Led team of software engineers and data scientists developing high-performance DNA analysis algorithms and automation platforms.
- Built web-based collaboration platform for genetic analysts to review and approve reports before customer delivery, which enabled development of new product offerings.
- Designed distributed genetic genealogy processing pipeline for relationship analysis at scale.
- Implemented custom SSE/AVX optimization of Smith-Waterman algorithm incorporating novel scoring mechanisms.
- Maintained trusted access to sensitive personal genetic data with demonstrated integrity and security practices.

Jan 2013 – Aug 2013 **Arpeggi Inc.**, Lead Software Engineer, Austin, TX

- Developed DNA sequencing analysis tools and accuracy comparison frameworks for genomics startup.
- Implemented real-time data visualization using JavaScript libraries with pivot table analysis and graphical reporting of software analysis accuracy.
- Contributed to research framework that became published paper in Nature Communications.

Dec 2011 – Jan 2013 **Bioware**, Software Engineer, Austin, TX


- Supported Star Wars: The Old Republic launch and live operations with server configuration and deployment tools.
- Contributed to new game patching system enabling "ready to play" state before complete downloads, improving user retention by reducing wait times.
- Managed automated Perforce branch merging tools and processes across 3 separate repositories (code, data, world content).
- Developed internal web applications for build monitoring and deployment automation.
- Established coding standards and refactored legacy build automation scripts, improving maintainability and readability.

Jan 2005 – Nov 2011 **Terminal Reality Inc.**, Senior Programmer, Lewisville, TX

- Progressed from junior to senior engineer, shipping 9+ titles across PlayStation 2/3, Xbox/360, Wii, and PSP platforms.
- Led company-wide version control migration from Visual SourceSafe to Subversion, designing automated history transfer scripts and managing the transition, training, and ongoing user support and maintenance.
- Optimized game performance using custom-built profiling tools and platform-specific optimization techniques, achieving significant performance improvements on resource-constrained platforms across multiple projects.
- Contracted to Treyarch (Activision) for Call of Duty: World at War Wii port, delivering critical performance optimizations using Wii-specific paired singles vector instructions and cache management techniques.
- Led prototype development for Def Jam Rapstar, implementing real-time audio algorithms for pitch detection, auto-tune, and compression on embedded systems.
- Designed scoring system for Kinect Star Wars dance mode using dynamic time-warping algorithms and custom C# WPF analysis and visualization tools for motion capture data.
- Developed automated asset compression and optimization pipelines, improving load times while maintaining visual quality.

---

## Publications

Feb 2015 **An analytical framework for optimizing variant discovery from personal genomes**, Nature Communications, [10.1038/ncomms7275](https://doi.org/10.1038/ncomms7275) 

Gareth Highnam, Jason J. Wang, **Dean Kusler**, Justin Zook, Vinaya Vijayan, Nir Leibovich, David Mittelman

---

## Education

2001 – 2004 **University of North Texas**, BS in Computer Science with Mathematics Minor, Denton, TX

- Graduated with 3.94 cumulative GPA, 4.0 in Computer Science and Mathematics courses.
- Competed in ACM International Collegiate Programming Competition for two consecutive years, representing UNT at regional competitions.
- Completed independent study in game programming under Dr. Ian Parberry and specialized coursework in computer graphics, algorithms, and technical writing.

---

## Skills

Systems Programming	Rust, C++, C#, Python, Performance Profiling, Memory Management, Multi-threading, Asynchronous Programming, Embedded Systems, Cross-Platform Development
DevOps	AWS (EC2, S3, Batch, ECS, Lambda, RDS, DynamoDB), Terraform, Docker, CI/CD, Infrastructure as Code, Cost Optimization
Technical Leadership	System Architecture Design, Technical Mentoring, Remote Team Collaboration, Technical Documentation, Code Review
Web Development	GraphQL, REST APIs, JavaScript, Node.js, Real-time Systems
Data & Analytics	SQL, PostgreSQL, MongoDB, Redis, Nextflow, Bioinformatics Algorithms, Genomic Data Processing, Statistical Analysis
Game Development	Game Engine Development, Build Systems, Version Control (Git, Perforce, SVN), Audio Processing, UI/UX Systems
Domain Expertise	Bioinformatics, Forensic Genomics, Scientific Computing