

# ROBERT GERVAIS

Software Engineer

🌐 kaoticgreen.github.io  
✉ robert.gervais@outlook.com  
📞 +1.425.951.3074 (US-based)  
📱 in/robert-gervais

## OBJECTIVE

To develop robust software pipelines that drive physical interactions with precisely engineered systems. Bridging the gap between **Industrial Arts** tactility and **Computer Science** logic.

## TOOLBOX

AUTOMATION & TOOLS	Python / C++ Lua / Unreal
QA / QC Protocols	SYSTEMS SIMULATION
INDUSTRIAL ARTS	Hardware Integrations

## EDUCATION

**B.Sc. Computer Science**  
*Real-Time Interactive Simulation Focus*  
DigiPen Institute of Tech. (2016)

**B.Sc. Industrial Arts**  
*Manufacturing Focus*  
Berea College (2002)

## PROJECTS

**Satoyama Dice**  
*LÖVE2D / Lua*  
Engineered a physics-based dice system with custom easing functions for tactile animation feel.

**Demon Crush**  
*Unreal Engine 5/C++*  
Engineered a fuzzy logic-based feedback system that responds to player actions.

## SOFTWARE & SYSTEMS ENGINEERING

**Director, Education & Learning**  
**Epic Games**

Jun 2023 - Mar 2025  
*Remote*

- **Pipeline Automation:** Led the "Zero-to-One" engineering of the *Epic Developer Assistant*. Automating the ingestion of 20,000+ technical documents into a vector database for RAG-based LLM retrieval.
- **Scale Architecture:** Designed the "Golden Path" onboarding flow, engineering the first user experience for millions of creators in the UEFN (Unreal Editor for Fortnite) ecosystem.

**Education & Learning Lead**  
**Epic Games**

Apr 2021 - Jun 2023  
*Remote*

- **Data Engineering:** Engineered SEO-driven content pipelines, using Python-based data scraping to analyze developer search intent and optimize documentation build systems.
- **Interactive Tooling:** Managed a hybrid team of engineers building interactive templates in Unreal Engine to teach coding concepts through gameplay.

**Sr. Technical Writer**  
**Epic Games**

May 2015 - Apr 2021  
*Bellevue, WA*

- **Bayesian Tooling:** Developed a custom Markov Chain Monte Carlo framework to analyze user reading telemetry, effectively "debugging" the documentation consumption pipeline.
- **Knowledge Graphing:** Mapped the entire Unreal Engine 4 API surface area to support the migration and launch of Unreal Engine 5.

## PHYSICAL SYSTEMS & QUALITY ASSURANCE

**Project Engineer**  
**Aegis Engineering Management**

2008 - 2015  
*San Diego, CA*

- **Infrastructure QA:** Managed the planning and validation study for the **Carlsbad Desalination Plant** (\$200M+ USD facilities). Enforced strict engineering tolerances across sub-consultant deliverables.
- **Compliance Logic:** Wrote reports for regulatory compliance (Title 22 / EPA), ensuring physical outputs met rigid government safety standards.

**Assistant Engineer I & II**  
**Boyle Engineering / AECOM**

2003 - 2008  
*San Diego, CA*

- **System Simulation:** Built and simulated hydraulic models for the City of Poway and Lemon Grove Sanitation District. Used algorithmic modeling to predict pressure failures and optimize pipe network configurations.
- **Production QC:** Directed on-site inspection and bacterial testing for high-pressure water pipelines. Verified material integrity (Steel/DIP/PVC) against design specs.
- **Field Engineering:** Performed precision land surveying and construction staking for **MCAS Miramar**, translating CAD drawings into physical reality.

"I build tools that help people build worlds—whether out of concrete or code."