

Brian Dacell Cabrera

SOFTWARE ENGINEER | APPLICATIONS DEVELOPER | DATA SYSTEMS DEVELOPER | FULL-STACK DEVELOPER
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SUMMARY

Software developer with a B.S. in Computer Science and experience across application development, database systems, automation, reporting, production support, and full-stack web tools. Builds internal tools, customer-facing systems, data workflows, gameplay systems, and reporting processes using Python, SQL, TypeScript/React, C#/Unity, HTML/CSS, VBA, and related technologies. Strong background translating business rules into tested, repeatable systems with documentation, validation checks, audit workflows, and cross-functional support.

TECHNICAL SKILLS

Languages: Python, JavaScript, TypeScript, C#, C++, Java, SQL, Lua/Luau, Perl, VBA, Bash, HTML/CSS

Web & Frameworks: React, Next.js, Angular, Node.js, Express, Django, REST APIs, Supabase, Vercel

Application Development: Full-stack development, internal tools, application support, system maintenance, requirements gathering, functional specifications, technical documentation

Data & Backend: SQL Server, Microsoft SQL development, PostgreSQL, MySQL, ETL, stored procedures, materialized views, staging tables, data validation, reporting workflows

Reporting & Analytics: Power BI exposure, Crystal Reports, Excel, PowerPoint, dashboarding, SQL reporting, ad-hoc analysis, KPI tracking, campaign reporting

Engineering: Git, GitHub, GitHub Actions, CI/CD, Agile/Scrum, TDD, UAT, QA testing, SOPs, secure coding, rollback planning, change management support

Automation & Workflow: Python scripting, VBA automation, CSV upload workflows, audit scripts, data cleansing, recurring reports, process documentation

Game Development: Unity, Unreal Engine, Godot, Roblox Studio, C#, procedural generation, finite state machines, NavMeshAgent, profiling, telemetry, GameAnalytics

EXPERIENCE

Database Analyst / Application & Data Systems Developer

Nov 2024 – Jun 2026

Soboba Casino Resort

San Jacinto, CA

- Helped develop, maintain, and test Soboba's customer-facing website using HTML, while also building missing features such as RSVP list functionality and supporting player-facing campaign workflows.
- Built and maintained mobile app player offers using Java and HTML, uniquely assigned to each player every month based on campaign rules, player segmentation, and offer eligibility.
- Built reusable, responsive HTML/CSS email templates adopted across the casino, replacing plain block-color emails with a more professional, on-brand system that improved consistency, speed, and presentation quality.
- Edited HTML in slot-machine game systems to serve offers personalized by player profile, earnings, and in-game progress, with offer activity relayed back to MySQL-backed systems.
- Edited Perl behind a per-profile online PDF offer booklet, supporting personalized player offer delivery and campaign presentation.
- Wrote SQL in a MySQL database I helped build to segment players, support campaign targeting, and improve repeatability across marketing and player database workflows.
- Scripted player and email segmentation workflows that turned slow daily manual requests into faster, repeatable processes, saving hours per day on ad-hoc requests.
- Built CSV-upload tooling to automate manual offer assignment with Python and VBA validation, audit scripts, and reconciliation checks, cutting roughly one week of manual auditing each month.
- Improved data integrity by approximately 20% and campaign efficiency by approximately 30% through validation workflows, repeatable exports, and cleaner campaign assignment processes.
- Automated recurring data extraction and reporting processes using Python and SQL, reducing manual workload and improving report accuracy.
- Built and maintained interactive dashboards and scalable reports using Crystal Reports, improving real-time decision-making across marketing and executive leadership.
- Performed detailed ad-hoc analyses on player behavior and campaign performance to identify actionable trends and optimize direct mail, email, and app targeting strategies.
- Conducted data quality audits and implemented cleansing procedures to reduce discrepancies and improve database reliability.
- Leveraged Optx and Experiture to extract, segment, and prepare player data for personalized marketing campaigns, improving event participation and engagement metrics.
- Partnered cross-functionally with marketing, operations, player services, and IT teams to define reporting needs, clarify requirements, troubleshoot issues, and support production workflows.

- Created documentation, SOPs, audit notes, and repeatable workflow references where processes were previously manual, inconsistent, or undocumented.
- Supported production-style casino systems in a 24/7 business environment where campaign timing, player-facing accuracy, and operational reliability were critical.

Software Programmer

Trashfire Games

May 2024 – May 2025

Chicago, IL (Remote)

- Built enemy AI and helped build five combat systems and enemy types in Unity/C#, including interactables and player states tied to in-game economy and currency systems.
- Shipped gameplay systems in the live Steam build, including support for continued updates and production-ready gameplay improvements.
- Found, reproduced, and fixed bugs end-to-end by logging them in GitHub and Google Sheets with video, screenshots, and clear reproduction steps.
- Optimized gameplay systems through object pooling and draw-call batching, contributing to approximately 30% fewer bugs and approximately 20% better frame time.
- Owned Git hygiene for a 40+ person Agile team, including issue triage, Git LFS, branch protection, PR templates, CI, and tagged releases through GitHub Actions.
- Collaborated daily across design, art, engineering, and QA to support implementation, testing, issue resolution, and gameplay polish.

Studio Production & Data Analytics Volunteer

Sandals Church

Jul 2024 – Oct 2024

Riverside, CA

- Coordinated backstage timing for live and recorded services, managing band transitions, media cues, and sermon flow so events stayed on schedule.
- Prepared documentation and workflow notes for live and pre-recorded shoots, and troubleshoot time-sensitive issues during services to prevent disruptions.
- Reviewed giving trends, participation patterns, and growth needs using Excel, Power BI, and PowerPoint to support church planning and facility decisions.
- Turned raw donation and engagement data into clear visuals and summaries for non-technical, leadership-facing audiences.

Network Assistant

Advanced Solutions Team

Mar 2024 – May 2024

Moreno Valley, CA

- Installed and maintained network hardware (Ethernet cabling, patch panels, switch ports) and monitored performance metrics to keep infrastructure reliable and available.
- Upgraded switch IOS and configured Aruba switches, using system logs and analytics to guide upgrade planning and assess post-deployment performance.
- Led inventory tracking through detailed asset tagging, and wrote Python and Bash scripts to analyze device deployment patterns, streamline documentation, and automate routine configuration tasks.
- Provided data-backed technical support by collecting and interpreting network diagnostics, reducing incident resolution time and improving service continuity.
- Packed, prepped, and staged ready-out-of-the-box units for installation, labeling and organizing devices into the right groupings so install teams could grab the correct units quickly.

Computer Science Tutor

Private STEM Tutoring

Dec 2022 – Jan 2024

New Haven, CT

- Hired by a former college tutor to tutor for his STEM tutoring business, working with roughly 40 students from pre-K through collegiate level.
- Developed and delivered custom lessons in programming (Python, C++, Java) and core software engineering principles, prioritizing genuine understanding of the material over memorization.
- Mentored students through the full problem-solving process, from understanding a problem to coding, testing, and debugging, and explained concepts in plain language they could apply independently.
- Created progress reports and detailed code feedback to track growth and keep students and families informed.

Founder / Lead Data Analyst

Aeternum Trading Co.

Sep 2021 – Jul 2022

Moreno Valley, CA

- Ran a digital-goods marketplace selling virtual in-game currency for real-world payment, owning pricing strategy, sales operations, and financial tracking end to end.
- Forecasted in-game economy demand and pricing using Python scripts, Google Sheets models, and Power BI, timing pricing and inventory to boost sales roughly 30% month over month at peak game popularity.
- Analyzed competitor pricing across a field of roughly 6,000 sellers and set undercutting and price-raising strategies to win share and protect margin; served approximately 20,000 customers across three servers.
- Built a multi-user financial tracking system in Google Sheets with custom scripts for real-time payroll, expense, and revenue analysis, running ongoing audits to keep data accurate and reliable.

SELECTED PROJECTS

- The Tower Is Hungry - Procedural Multiplayer Game** Lua, Roblox Studio, DataStores 2026
- Architected a procedurally generated multi-floor tower (~10,000 lines of Lua) where every route is assembled at runtime from composable shape and obstacle modules (moving, crumbling, spinning, bouncing platforms), guaranteeing a solvable path on every generation.
 - Designed a three-tier economy with 50+ stacking upgrades, floor-scaled exponential pricing, and persistent cross-session progression via DataStores.
 - Built server-authoritative multiplayer round logic: a shared rising-threat mechanic, checkpointing, elimination, and win conditions, with clients rendering only.
 - Developed a custom static-analysis suite (declaration-order, scope, and dead-code checks) to catch a class of runtime bugs the Lua compiler does not surface.
- Mustang Money - Casino Promotional Game Prototype** Unreleased Internal Project (Soboba Casino Resort) 2025
- Built Mustang Money, an unreleased casino promotional-game prototype featuring player-controlled coin collection and a two-stage RNG system that determined both the permitted reward range and the actual coin spawn count.
 - Programmed the gameplay, reward logic, mustang controls, and coin spawning/collection, created original visual assets and integrated premade content into a functional demonstration.
 - Designed the prototype around tribal gaming compliance requirements, balancing randomized outcomes with defined promotional payout limits and player-facing accuracy.
- AI-Powered Customer Segmentation Platform** Python, Streamlit, LLM APIs (Groq, Gemini) 2026
- Built an autonomous analysis agent where an LLM plans its own multi-step workflow, selecting and sequencing tools such as cleaning, segmentation, and value analysis toward a user-defined goal.
 - Added a validation loop that checks each proposed action before execution, helping prevent unsafe, malformed, or incorrect workflow steps.
 - Exposed trusted Python functions as agent-callable tools and validated the model's JSON output, including malformed responses.
 - Added multi-provider LLM failover and dynamic schema detection for arbitrary uploaded files.
- BrianCabrera.io - Full-Stack Portfolio Platform** Next.js, TypeScript, React, Supabase, ArcGIS, Vercel 2026
- Designed and deployed a responsive portfolio platform with case studies, analytics tools, geospatial apps, browser games, security demos, and technical writeups.
 - Built a Supabase authentication system with protected routes and Row Level Security.
 - Developed interactive front-end features using React, Next.js, TypeScript, and Tailwind CSS, deployed through Vercel with Git/GitHub release management.
- Airplane Mode - Offline Puzzle Game (PWA)** Vanilla JavaScript, PWA, Web Audio, Service Workers, Node, Python 2026
- Live: airplanemodebeta.netlify.app
- Built a from-scratch, offline-first puzzle game as an installable PWA in vanilla JavaScript with no frameworks or dependencies, fully playable with no network.
 - Designed an interaction-agnostic puzzle engine where each puzzle declares how it is solved and the UI renders the matching handler, making roughly 50 puzzle types easy to add.
 - Built a 120-stage campaign with themed chapters and boss stages, plus endless, daily, and local two-player modes, English/Spanish/Chinese localization, themes, and accessibility options.
 - Wrote a Node test suite for the engine, bundled the app to a single offline HTML via a Python build script, and deployed it over HTTPS.
- Player Segmentation / Data Lab Tool** Python, Streamlit, CSV Workflows, Data Validation 2026
- Built a flexible data analysis tool that accepts arbitrary CSV files and lets users map ID, value, and recency fields, with dynamic schema detection and confirmation steps.
 - Created segmentation logic for value-based and recency-based grouping to identify high-value, inactive, low-value, or recently active records.
 - Added validation checks to reduce bad inputs, missing fields, and malformed data issues.
- Gameplay Systems and Browser Games** Unity, C#, JavaScript, React, TypeScript 2024 - 2026
- Built gameplay systems across Unity and browser projects, including combat mechanics, AI behavior, player states, scoring systems, blackjack logic, Snake controls, a three-lane shooter prototype, and interactive UI.
 - Implemented telemetry, gameplay state tracking, bug fixes, and user-facing polish across multiple game projects, managed with Git, GitHub, and Agile workflows.

EDUCATION

California State University, San Bernardino Dec 2023

B.S. in Computer Science • GPA 3.3 • Dean's List 2022–2023 • CNS Edison Scholarship Recipient