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# Skills

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| * **Programming Languages**: Python, SQL (MySQL, SQL Server), C++, VB .Net, Java, C#, XML * **Tools**: VS Code, DBeaver, Perforce Visual (P4V), Vagrant, CentOS, Redis, Locust, Visual Studio, GitHub, Eclipse, MySQL Workbench, SQL Server Management Studio (SSMS), Jira, Confluence |

# Work Experience

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| Software Engineer, Backend | Lost Boys Interactive | | Dec 2022 – Present | |
| Tech: Python, Vagrant, Flask, VS Code, CentOS, MySQL, Redis, Locust, Perforce | | | | |
| Project: WWE 2K24 – MyFaction Mode | | Apr 2023 – Present | | |
| * Designed and implemented Flask App API (Python), database schema (MySQL), and Leaderboards (Redis) for “Ranked Play” multiplayer mode. Implemented data-driven Seasons and Seasonal Rollover processing, including calculation and distribution of Seasonal Rewards. * Drove Load Testing, resulting in performance optimization of over 25 API endpoints, finding a memory leak and tracking its source to a third-party library. * Post-launch, transitioned to Live Operations Tech Lead, becoming first technical point of contact for Production incidents.   + Lead a team of 2-3 Engineers, working with the Engineering Director and Live Ops Producer to determine priorities, create Jira tasks, and plan sprints. | | | | |
| Project: WWE 2K23 – MyFaction Mode | | Dec 2022 – Apr 2023 | | |
| * Improved Flask app endpoint performance for “Live Events” retrieval by 70% (70ms per call) by implementing caching using Redis. * Analyzed and optimized over 20 Server API endpoints by performing Load Testing using Locust. * Rapidly responded to 4 Urgent Production incidents after Launch, triaging bugs, implementing root cause fixes, and deploying updates within 24 hours. | | | | |
| Implementation Consultant | Fast Enterprises, LLC | | Sep 2017 – Mar 2022 | |
| Tech: VB .Net, Visual Studio, SQL Server, SSMS, XML | | | | |
| Project: Illinois Tax | | APR 2021 – Mar 2022 | | |
| * Supported implementation of Audits in the Department of Revenue’s installation of FAST’s tax administration software, GenTax, by gathering requirements, analyzing business processes, and designing, developing, and testing solutions. * Improved quality and performance of file generation code for the Collections area’s interface files by utilizing FAST’s core file processing libraries and refactoring to adhere to coding standards. | | | | |
| Project: Mississippi Tax | | Sep 2017 – APR 2021 | | |
| * Reduced daily file generation time by 80% (16 minutes) by reorganizing data and utilizing multi-threaded batch processing. * Supervised a team of four direct reports, assigning tasks, providing actionable feedback, mentoring, and completing annual performance evaluations. | | | | |
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| Implementation Consultant | Enlightened, InC | | May 2016 – Sep 2017 | |
| Subcontractor to Fast Enterprises, LLC | |  | | |
| Tech: VB .Net, Visual Studio, SQL Server, SSMS, XML | | | | |
| Project: District of Columbia Tax | | | | |
| * Reviewed XML Schemas to implement electronic filing through the IRS. * Developed a new integration with US Bank, so thousands of underbanked taxpayers can receive their tax refund on a prepaid debit card instead of direct deposit or a paper check. | | | | |
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| Integration Engineer | Epic Systems Corporation | | | Apr 2014 – Apr 2016 |
| Tech: Cache ObjectScript, M, XML, HL7 | | | | |
| * Designed and developed interfaces between Epic’s electronic health record software and third-party systems, such as registration systems and radiology devices. * Wrote an XML interface for clinical correspondence regarding over 2.8 million patients. | | | | |

# Education

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| Bachelor of Science, computer Science | West Virginia University |
| MINOR in Physics | May 2013 |

# Personal Projects

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| MaNGOS Server Character Info Tool | Python, MySQL |
| Source code not hosted online | More Info: <https://chrisbarill.com/wowarmory> |
| A graphical tool for viewing character information on a local MaNGOS server (open-source World of Warcraft server emulation software). Uses Tkinter for the GUI and MySQL database connector to retrieve data. | |
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| Minecraft Character Swap | Python |
| Source code not hosted online |  |
| A command line tool to support having multiple characters, with different inventories and locations, on a single account for a local server (Minecraft: Java Edition only). Works by moving and renaming player data files, with guardrails to prevent loss of data, for example by accidental overwriting or deletion. Configurable to query the Mojang API. | |
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| Simple Dungeon Game | C++ (SFML) |
| <https://github.com/cbarill2/SimpleDungeonGame> |  |
| A tile-based, turn-based RPG with simple mechanics to digitize tabletop gaming for kids. It features a procedurally generated game board with animated “programmer art” sprites, multiple attack choices, drag-and-drop dice, and numerous enemies to defeat. | |
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| Pong | C++ (Direct2D) |
| <https://github.com/cbarill2/Direct2DPong> |  |
| Re-creation of the game Pong with a bouncing ball and 2 opposing paddles, which can be moved independently using one keyboard (W and S to move the left paddle and the up and down arrow keys to move the right paddle). | |