

Trent Best - Digital Integration, VDC, BIM Software, & Efficiency Specialist

512-296-0434 | Best4BIM@gmail.com

https://github.com/TrentBest/FSM_API | https://github.com/TrentBest/FSM_API_Unity

Summary

Highly driven technologist with a proven ability to develop and implement innovative software solutions, now seeking a dedicated Software Developer role. Over 15 years of deep expertise in Building Information Modeling (BIM) and Virtual Design & Construction (VDC), where I have consistently applied programming, automation, and data integration to transform complex workflows. Passionate about architecting efficient systems and leveraging code to solve real-world industry challenges. At Amazon, engineered a workflow that reduced project timelines by 85% (from two months to one week), demonstrating my capacity for impactful software solutions. My extensive domain knowledge in AEC, combined with a strong programming foundation in C#, Python, and Java, makes me uniquely positioned to build next-generation applications.

Software Development & Automation Projects

Finite State Machine (FSM) API & Unity Integration: Architected and developed a robust, pure C# FSM API (available on GitHub) for complex behavior management, with an in-progress Unity Asset Package.

Revit Dynamo Automation: Created an optimized Dynamo graph for automated, precise hanger support placement for MEP components, streamlining construction documentation.

Custom C# Add-ins (Amazon): Developed bespoke C# applications for Revit, integrating with platforms like dRofus and ArcGIS, achieving significant workflow efficiencies (e.g., 7x gains).

CNC Program Generation (Blu Homes): Developed a Python script to convert BIM model data into CNC programs for precise modular construction manufacturing.

AI Bot Development: Programmed an AI bot capable of playing StarCraft 2, demonstrating advanced algorithmic thinking.

BIM Rx Revit Add-in (Microdesk): Contributed as a Junior Developer, programming parameter functionality for a commercial Revit add-in.

Technical Skills

- Programming Languages: C#, Python, Java, C++
- BIM & AEC Tech: Revit API, Dynamo, dRofus, ArcGIS, VDC
- Development Tools: Git, Visual Studio, Unity, Agile/Scrum concepts
- Key Concepts: Workflow Automation, Data Integration, Generative Design, Procedural Design, Parametric Modeling, Software Engineering and Design

Professional Experience

BIM Consultant for Amazon | 2021 – 2024

- Led development of a Net Zero Carbon BIM Calculation framework within Revit, enabling highly accurate, multi-model parametric control and data aggregation.
- Drove workflow optimization achieving 7x efficiency gains through strategic software integrations and process definition.
- Spearheaded data synchronization initiatives, including Kit of Parts concepts and bi-directional data flow between Revit and dRofus.

BIM Technology Lead, Microdesk | 2018 – 2021

- Specialized in BIM integration R&D, defining workflows to enhance client consistency and efficiency through technical solutions.

BIM Electrical Lead, NAC | 2015 – 2018

- Managed BIM modeling teams for large K-12 projects, including Washington's largest high school.
- Developed custom electrical standards and tools for live load calculations with fully parametric Revit families.

BIM Production Lead, Blu Homes (Startup) | 2014 – 2015

- Oversaw BIM modelers, coordinating factory shop drawing derivation and design flaw resolution.
- Implemented process improvements that accelerated production, shifting the primary bottleneck to shipping logistics.

Prior BIM Contributions | Rosendin Electric (BIM Specialist 2010 – 2014), Titan AEC (BIM Consultant 2009 – 2020), Christiansen Group (BIM Specialist 2007 – 2010)

- Implemented and enforced BIM standards across diverse design and construction projects.
- Managed and modeled a wide portfolio of projects, including data centers, NASA facilities, healthcare, and high-rise structures.
- Provided comprehensive BIM services, including advanced modeling from point clouds and developing custom content libraries for manufacturers.

Education

Computer Science studies, California State University, Chico

Additional Experience

Nuclear Electricians Mate 3rd Class, US Navy (2004 – 2007) – USS Nimitz (CVN-68)
Game Tester, Electronic Arts – Achieved top bug counts.