Nathan Caldwell
Game Engine Software Developer - The Boeing Company

Huntsville, AL - Email me on Indeed: indeed.com/r/Nathan-Caldwell/8e0702cb1ae0dc72

Intuitive and proficient software developer and engineer with experience in multiple languages across varying development environments and platforms. Development experience includes enterprise-level, web-based, defense related
software products developed using object oriented C#, C++, and Java; game and simulation design using Unity, and 3Ds
Max; mobile Android applications using Eclipse, the Corona IDE and Lua. Software engineering experience spans from
requirements gathering and analysis to validation, maintenance, and testing in a Scrum/Agile team structure.
Willing to relocate to: Seattle, WA - Houston, TX
Authorized to work in the US for any employer

WORK EXPERIENCE

Game Engine Software Developer
The Boeing Company   -   Huntsville, AL - March 2016 to Present

Provide software development and engineering support on behalf of the Advanced Design and Prototype Solutions (ADaPS) division of The Boeing Company in support of the Interactive Visual Analytics and Simulation (IVAS) team in the Huntsville, Alabama area.
• Utilize the Unity game development engine, to design, implement, and enhance interactive applications to be used
by NASA and internal Boeing customers for training, visualization of complex system structures, chartless reviews, animation and interactivity of component design, and analysis of real-time data.
• Use game development tools and object oriented C# scripts to map and correlate engineering information to actual Computer Aided Design (CAD) designed 3D assemblies and subassemblies while providing visualization
and an intuitive interface to allow users to easily analyze their current engineering data in a logical manner.
• Develop and assign C# scripts to game objects in scene to generate functionality, guide system execution and threading, and to increase performance and memory usage.
• Employ 3D modeling tools, such as Autodesk 3Ds Max, to design models and animations to be incorporated into Unity applications, as well as to reduce resource-intensive CAD assemblies into usable game assets.
• Utilize Tortious SVN as code, model, and project repository.
• Utilize JIRA to produce an Agile set of software development life cycle procedures to be followed by team members for streamlining requirement analysis, development tasking and tracking, production, and distribution of IVAS applications.

Software Developer
Modern Technology Solutions Incorporated - April 2015 to March 2016

Provide software development support to the Network Systems Integration and Test Environment (NSITE) program while working in a SCRUM/Agile development environment.
• Develop C#, C++, OpenGL, and CSS code for simulating and visualizing real-time friendly and hostile weapon emplacements, launchers and interceptors. Code captures live communications between fielded combat elements for decoding, translating to a tactical 3D display, data parsing, and logging in a SQL Lite database.

• Develop C++ code for solutions that manages, converts, stores, and redistributes real-time messages of varying
formats (UDP and TCP/IP).
• Develop C# and SQL database solutions for the storage, processing, retrieval, and visualization of external communications.
• Convert rigid and unmanaged legacy C++ code to a more flexible and managed C# based architecture.
• Debug existing code base for threading and memory deficiencies, crash related issues, and overall coding structure.
• Provide software integration and testing support during Fully Qualified Tests (FQTs) and Functional Tests.

Software Integration and Load Engineer

Modern Technology Solutions Incorporated - Redstone Arsenal, AL - January 2015 to April 2015

and the White Sands Missile Range (WSMR) locations.
• Establish and upgrade network capacity within the internal server stack, external hardware components, remote
sensors, and other related interfaces.
• Install, maintain, and troubleshoot several virtual machines consisting of both Windows and Linux-based
operating systems mounted within the servers utilizing VM Server and VM Client.
• Install and execute the latest version of the application software across all system components and run checkout
scenarios to ensure proper installation and functionality of all associated elements.
• Provide detailed analysis and feedback on existing installation documentation and implementation.

Software Engineer

Modern Technology Solutions Incorporated - March 2013 to January 2015

Provide detailed assessments pertaining to static code analysis, dynamic systems analysis, thread analysis, code
metrics and complexity, unit testing, reverse engineering, requirement analysis, and software traceability on the IAMD software.
• Utilize Linux-based software products such as Parasoft for static and dynamic analysis.
• Analyze Java and C++ code for coding violations, potential defects, security deficiencies, thread timing, memory
management, and overall efficiency.
• Provide detailed assessments and documentation describing flaws in the code structure, architecture, integration,
build process, coding standards and practices along with recommended solutions to the government customer.
• Provide detailed evaluations of both system level and implementation level requirements, test procedures, and build instructions.
• Evaluate system level requirement documents, test procedures, and code architecture documentation.

ASP.NET Developer

Planned Systems International - Huntsville, AL - August 2012 to February 2013

Design, implement, and maintain several web-based, object oriented software products utilized by the US Army
Corps of Engineers (USACE) Learning Center.
• Software products developed using Visual Basic, ASP.Net, and HTML with a MS SQL backend. Utilized Crystal
Reports to dynamically report requested data to the customer through customized SQL commands.

• Design, implement, modify, and document varying components, functionality, pages, and reports on a web-based
learning tracking system used by USACE educators.
• Directly interface with customers to generate desired requirements.

Computer Programmer I
Bering Straits Information Technology   -   Huntsville, AL   -   December 2011 to August 2012

Design, implement, and maintain object oriented software products utilizing C#, WPF, HTML, and the .Net 4.0
Framework with a Microsoft SQL database backend while operating in a SCRUM/Agile environment.
• Develop desktop, mobile, and web-based, applications used by Redstone Test Center pilots. Projects include
a digital flight test checklist, a timekeeping system, and web-based data collection applications.
• Create SharePoint-based applications to be used and viewed across the organization.
• Prototype and implement mobile Android applications with Windows-based desktop companions to be used
across multiple systems and hardware configurations.
• Research and develop a Microsoft Kinect application to interface with an interactive radar overlay.

Research Aide 3
UAH Systems Management and Production Center   -   Huntsville, AL   -   February 2007 to September 2011

Utilize Autodesk's 3Ds Max, Adobe After Effects, and Adobe Photoshop to design, develop, modify, and animate
3D objects, scenarios, and scenes to depict tools, weapon systems, and training instructions as described by US
Army customers.
• Aide researchers in developing story boards and designing 3D representations and animated videos of military
weaponry, systems, scenarios, and training situations.
• Develop Max Scripts and macros to automate repetitive modeling and texturing tasks.

EDUCATION

Master of Science in Computer Science in Computer Science
University of Alabama in Huntsville   -   Huntsville, AL
March 2018

Bachelor of Science in Computer Science in Computer Science
University of Alabama in Huntsville   -   Huntsville, AL
August 2011

SKILLS

3Ds Max (6 years), C# (5 years), object oriented (7 years), requirement analysis (3 years), Unity Game
Engine (2 years), SQL Database (5 years)

ADDITIONAL INFORMATION

Skills
• ADO.Net • Lua language • Postgre SQL •
• Android Development • Microsoft Azure • Relational Databases
• ASP.Net • Microsoft Access Database • Requirement Analysis

- Autodesk's 3Ds Max • Microsoft Kinect API • SCRUM/Agile
- Blend for Visual Studios • Microsoft Office Suite • SQL Server (and SQL Lite)
- Corona SDK • Microsoft SQL Server • Team Foundation Server
- Crystal Reports • MVC • Tortoise SVN
- CSS • .Net Framework 3.0 and higher • Unity Game Engine
- Eclipse • Object Oriented C#/C++ • Unreal Development Kit
- HTML 5 • Object Oriented Java • Visual Basic
- LINQ to SQL • Open Stack (Cloud) • WCF
- Linux Shell Scripting • Parasoft Static/Dynamic Analysis • WPF