

# Craig Hobbs

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## Software Development Leader

Experienced software development manager and software developer with a passion for building effective software teams and systems.

- 15 years experience managing software development teams
- 20 years C/C++ software development experience
- 10 years Python software development experience
- Other languages: JavaScript, HTML, CSS, Java, C#

## Experience

### Senior Director, Engineering

Zillow Group, Seattle, WA  
2/2017 - 5/2019

Director of Engineering responsible for Zillow Home Loans, Zillow Mortgages (marketplace), and Mortech.

- Managed three geographically distributed software development teams.
- Launched Zillow Home Loans with revamped technology stack.
- Led technical due diligence for Mortgage Lenders of America acquisition (completed 11/2018).

### Senior Development Manager

Zillow Group, Seattle, WA  
4/2012 - 2/2017

Software Development Manager for Zillow Mortgages.

- Managed team of 6 developers.
- Transitioned legacy Java web application to Python back-end web services and React client-rendered front-end application.
- Led technical due diligence for Mortech acquisition (completed 11/2012).

### Software Development Manager

Cisco Systems, Seattle, WA  
8/2008 - 11/2011

Development manager of Cisco Home Networking Platform team. Acquired as part of Cisco's acquisition of Pure Networks, Inc.

- Managed Cisco Home Networking Software Platform team of 4-5 developers.
- Managed effort to define the JNAP web services protocol for Cisco Cloud Connect. Generated complete documentation set for HNAP and JNAP protocols.
- Architected and developed Cisco Cloud Connect embedded transactional SOAP/JSON web services framework for JNAP/HNAP protocols in Lua and C based on the HDK server. Framework included simulated device unit test framework for thorough implementation unit testing.
- Developed transacting JNAP cloud back-channel support for Cisco Cloud Connect.

- Architected and developed HNAP Development Kit (HDK), a SOAP/JSON validating client/server web services toolkit. HDK library code written in C. HDK code generators, API documentation generators, and other tools written in Python.
- Developed cross-platform build framework using GNU make to allow single build structure for Windows, Mac, and Linux.
- Defined HNAP Specification Language (HSL) for defining HNAP and JNAP protocols. Developed language parser, language object model, and schema/module code generator tool in Python.
- Developed HDK Lua language bindings in C and Lua C API.
- Managed effort to develop JNAP/HNAP certification tools as well as ensuring that devices passed certification. Worked with internal and external partners to address issues.

#### **Lead Software Development Engineer**

Cisco Systems, Seattle, WA

2/2008 - 8/2008

Development manager of Pure Networks Platform team. Acquired by Cisco.

- Managed Pure Networks (Network Magic) Platform Team of 4-5 developers.
- Managed Pure Networks Platform release cycles ensuring timely delivery of platform features to licensees (e.g. Cisco) and internal customers (e.g. Network Magic).
- Develop features in Pure Networks platform using C++ and COM.
- Manage effort to fully document Pure Networks Platform using Doxygen.
- Technical point of contact for Pure Networks Platform licensees. Worked with business development team to pitch the Pure Networks Platform to potential partners.

#### **Lead Software Development Engineer**

Tableau Software, Seattle, WA

7/2005 - 12/2007

Development Lead for Tableau Desktop team.

- Managed Tableau Desktop team of 3-5 developers.
- Managed Tableau Desktop product requirements gathering, feature definition, and software development schedules.
- Architected and developed annotation feature using C++ -- Visio-like smart shape engine, rendering surface, hit-testing, selection, and abstract handle architecture.
- Designed and developed packaged workbook feature using C++ and zlib. Created packaged workbook APIs using C++ for Tableau Server.
- Designed and developed columnar visualization field labels feature using C++.
- Designed and developed data label manipulation feature using C++.
- Designed and developed mapped image UI and hyperlinks UI using C++ and MFC.
- Designed and developed filtering UIs, joins UI, data extract UI, and table calc UI using C++ and MFC. Re-factored backend filter editing interfaces.
- Designed and developed color encodings and UI using C++ and MFC. Created color palette editing tool in Visio.
- Designed and developed Tableau printing support using C++ and MFC.

#### **Senior Software Development Engineer**

Microsoft, Seattle, WA

9/2000 - 4/2004

Visio ShapeSheet Owner - Responsible for Visio ShapeSheet Engine (SSE), binary file format, binary file format conversion, drawing/shape merge, placement and routing.

- Invented and implemented SSE geometry functions using C++.
- Designed and implemented SSE cell functions using C++.
- Designed and implemented SSE model generation using C++.
- Invented and implemented SSE SetAtRef and Bound functionality using C++.
- Added new sections, rows, cells, functions, enumerations, and types using C++.
- Implemented "phase 3" conversion framework (C++) and code generation tool (Perl).
- Implemented indexed-to-named section conversion using C++.
- Designed and implemented Visio ShapeSheet file format reporting and differencing tool using Perl.
- Implemented NURBS connector (curved appearance dynamic connector with obstacle avoidance) using C++.
- Re-factored graph object synchronization code using C++.

#### **Lead Software Development Engineer**

Rivals.com, Seattle, WA

11/1999 - 9/2000

Development Lead for Rivals website team of 4 developers.

- Managed team of 4 developers responsible for developing Rivals.com website.
- Developed live Major League Baseball scores page using Perl and Javascript.
- Designed and developed Rivals template builder architecture. Wrote template compiler using C++. Designed database schema and stored procedures using SQL Server. Developed website runtime support using ASP, Javascript, and ADO.
- Developed Rivals.com website Javascript preprocessor using C preprocessor and nmake.
- Developed common href utilities and macros using Javascript, ASP, and C macros. This enabled multiple verticals and multiple domains per server.
- Developed website debug and profiling facilities using ASP, Javascript, and C macros. Developed Rivals debug window for viewing debug output in VB. Wrote profiler ASP component using C++, ATL, COM.
- Developed several website modules including ad module and story modules using ASP, Javascript, and ADO.

#### **Software Development Engineer**

Visio Corporation, Seattle, WA

6/1997 - 11/1999

Developer on Visio Engine Placement and Routing (PNR) Team.

- Responsible for development of graph object and integration with Visio engine; implemented C++, ATL, COM, IDL.
- Wrote PNR feature definition for Visio 2000; detailed functionality, UI, data requirements, file conversion.
- Designed and developed custom properties and size and position windows in C++ and MFC.
- Designed and developed dialog sub-system and viewer in C++ and MFC.

#### **Software Development Engineer**

Hughes Information Technology Systems, Aurora, CO

2/1996 - 5/1997

- Architect/developer on Java distributed agent research project; designed distributed agent architecture and developed domain-specific solutions within architecture. Implemented using Java and Java RMI.
- Developed C++ GUI (X/Motif) code generation tool in C++; tool used extensively in-house to improve efficiency and quality of C++ GUI development.
- Designed and developed X/Motif GUI front-end for C++ GUI code generation tool in C++.
- Developed automatic code-merging feature for C++ GUI code generation tool in Perl.

### **Software Development Engineer**

Quark, Inc., Seattle, WA  
6/1993 - 2/1995

Member of QuarkXPress for Windows development team.

- Designed and implemented context sensitive help support in QuarkXPress in C.
- Developed software (C++) and process used to duplicate and serialize product diskettes increasing ease of use and installation; made product production more efficient.

## **Patents**

Hobbs, C. "[System and method for efficiently creating splines](#)" - US Patent No. 6654016, 2003

Hobbs, C., LeGendre, S., Fuhr, R. "[System and method for placing splines using refinement and obstacle avoidance techniques](#)" - US Patent No. 6650328, 2003

Hobbs, C. "[A Method for Formulaically Redirecting and Modifying Formula Set Operations in a Spreadsheet](#)" - US Patent No. 7444584, 2008

Hobbs, C., LeGendre, S., Nelson, M. "[A Method of Formulaically Bounding \(Validating\) Data in a Spreadsheet](#)" - US Patent No. 7318192, 2008

Hobbs, C. "[Functions acting on arbitrary geometric paths](#)" - US Patent No. 7612776, 2009

## **Education**

*Masters of Business Administration (MBA), Technology Management, 2007*  
University of Washington, Seattle, WA

*Bachelor of Science (BSc), Electrical and Computer Engineering, 1993*  
University of Colorado, Boulder, CO