

SENIOR 3D SOFTWARE ENGINEER SENIOR 3D SOFTWARE ENGINEER SENIOR 3D SOFTWARE ENGINEER - Align Technology San Jose, CA Senior programmer with over 20 years of progressive software development and research experience. Strong analytical/mathematical background. Master of Science. Author of 12 scientific papers focusing on numerical methods. Programming languages C, C++, C#, JAVA, Visual Basic, Pascal, Delphi, FORTRAN, MatLab, Perl, VBA, Lua. Work Experience SENIOR 3D SOFTWARE ENGINEER Align Technology - San Jose, CA 2017 to Present Design and implementation of software for bio mechanical researches and the orthodontics devices creation. 3D visualization for orthodontics treatment planning. Design and implementation algorithms for meshes deformation. Tools used: Visual Studio, C++, OpenGL, multithreading SOFTWARE ENGINEER BITANIMATE - Lake Oswego, OR 2016 to 2017 Design and implementation of Stereo Landscape Visualization on Windows and Android. Building stereo pairs from single pictures using machine learning. Tools used: Java, Eclipse, Android Studio, NASA WorldWind, Open Streets, JavaScripts, HTML, Tensorflow, CUDA, C++, Python SOFTWARE ENGINEER 4 MENTOR GRAPHICS - Wilsonville, OR 2014 to 2016 Design and implemented graph processing algorithms: detection of two and three cuts, separation pairs in linear or nearly linear time, 3 and 4 colors graph coloring etc. Tools used: C++, multithreading, Linux SENIOR SOFTWARE ENGINEER CUSTOM CONTROL CONCEPTS - Kent, WA 2013 to 2014 Design and implementation of 2D and 3D moving maps. Design and optimization structures for data exchange. Implementation 3D objects processing algorithms using CPU and GPU. Tools used: Visual Studio 2010 C++, C#, Windows 7, STL, Open GL, Direct X, multithreading, HLSL, GLSL, vTune, Intel GPA, NVIDIA Nsight SOFTWARE DEVELOPER Redlands, CA 2010 to 2013 Design and implementation of 2D and 3D visualization systems for GIS. Optimization structures for data exchange. Implementation 3D objects processing algorithms using CPU and GPU. Dynamic creation of 3D objects. Using parallel computing (GPGPU) for texture generation (e.g. the atmosphere scattering simulation for sky visualization). Tools used: Visual Studio 2008, 2010 and 2012 C++, Windows 7, STL, Open GL, Direct X, multithreading, HLSL, GLSL, Cg, CUDA, vTune, NVIDIA Nsight SENIOR SOFTWARE DEVELOPMENT ENGINEER ATI Research Inc -

Boxborough, MA 2006 to 2010 Design and implementation of an application that collects information from graphics libraries wrappers, processes and visualizes it. This application also can set graphic states overloads and find bottlenecks by analyzing the frame rate changes. Development of shader debuggers. This work included patching shaders and mapping between the Assembler and HLSL codes. Porting data collectors from Windows desktops to embedded platforms (Windows CE and Embedded Linux). Writing OpenCL samples. Tools used: Visual Studio 2005 and 2008, C, C++, Qt, Qwt, Windows (7, XP, CE and Vista), UML, STL, Lua, Direct3D, Open GL, HLSL, GLSL, XML, Linux (including embedded), Sockets, OpenCL, GPGPU, multithreading, Win32 SDK. SOFTWARE ENGINEER subdivision of Sungard, Inc - Boston, MA 2004 to 2006 Development, support and debugging code and algorithms for the financial simulation (Bancware AML). This application simulates (both Monte Carlo and determinately) cash flows, market values, schedules for various financial instruments including options, mortgages, bonds, CMO etc. Reported to Software development VP. Tools used: Microsoft Visual Studio .NET, Visual C++, COM, STL, ATL, Excel automation, Windows XP, 2000, MS SQL Server, Andrew Davidson and Intex libraries, multithreading, Win32 SDK. SENIOR COMPUTER SCIENTIST Menzie-Cura & Associates, Inc - Winchester, MA 2004 to 2004 Environmental fate and transport modeling to support human health and ecological risk assessments. Development and optimization functions for Monte-Carlo simulation, report generation, geometric transforms and graphic input. 500% acceleration of report generation was achieved; 300% acceleration of Monte-Carlo simulation was achieved; Tools used: Borland C++ Builder, Compaq Visual Fortran, Windows XP, STL, VBA, Excel and Word automation. SENIOR SOFTWARE ENGINEER PTC, Inc - Needham, MA 2001 to 2004 Development, support and debugging code and algorithms for core application of MCAD system. Leadership of temporary groups. Reported to R&D Director. Optimized features relationship functionality. Added new features into Draft module, which resulted in increased drafts flexibility and removal of many restrictions. Resolved problems in licensing and regeneration functionality. Tools used: C /C++, Visual C++, Visual Basic, Perl, Solaris, Windows 2000/XT, Linux, SUN UDS (Forte), ClearCase. Education Fedorov Institute for Applied Geophysics - Moscow, RU 1987 to 1990

Master of Sciences in Physics Lomonosov Moscow State University 1977 to 1983 Skills HTML,
MFC, OOP, XML, LINUX, Java, Javascript

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