Contact

www.linkedin.com/in/dr-victor-dods (LinkedIn)

Top Skills

Computer Science
Programming
Linux

Patents

Secure messaging in a machine learning blockchain network
Establishing a trained machine learning classifier in a blockchain network
Neural network classifiers for blockchain data structures

Victor Dods

Chief Software Architect at LedgerDomain
Santa Cruz, California, United States

Summary

Currently, I'm in charge of software dev at LedgerDomain, developing blockchain applications for several industries. My work time is mostly occupied there, though I may still be open to a particularly interesting contract.

In general, I seek contract work on projects exercising a combination of my skills and knowledge as a mathematician and software developer in which I can fill a role emphasizing:
• Service as mathematics expert (emphasizing areas such as analytic and differential geometry, tensor and advanced linear algebra) and C++ expert to others by supporting their needs in those fields (e.g. answering questions, solving mathematical problems, providing proofs of concept).
• Engagement in math-oriented research and/or software prototyping, producing clear mathematical documents and well-documented code. Developing software implementations of mathematically sophisticated concepts and algorithms.
• Providing technical leadership in a small team involving projects focused on my core areas of expertise.

github.com/vdods
thedods.com/victor

I have about 12 years of professional software development experience (1.5 of that in the game industry). However, computer programming is also my main hobby, which I have pursued for more than 22 years in various languages (mainly C++).

In terms of non-math software, I'm interested in compilers and programming languages (I've got my eye on LLVM), and computer graphics (to which some of my math research has been applied), having worked on several projects in each field.

Specialties: Any sort of game programming (except sound). Applying differential geometry to graphics and algorithms. In the course of designing/implementing the BARF compiler tools and designing/implementing a scripting language in a professional capacity, I have gained much experience and knowledge in scanners, parsers, and their respective theories.

My PhD thesis is available online: http://thedods.com/victor/papers/20131207-victor-dods-phd-thesis.pdf

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Experience

LedgerDomain
Chief Software Architect
September 2016 - Present (8 years)

LedgerDomain is an enterprise blockchain company working to bring fast, personalized, and secure transactions to the pharmaceutical supply chain. Our technology drives powerful mobile applications and executive dashboards that help deliver the right medications to the patients who need them.

Fullpower
Consulting Mathematical Engineer
2015 - 2016 (1 year)

Leap Motion
Mathematician/Software Engineer
August 2012 - July 2015 (3 years)
San Francisco

Notable work done here: Conducted algorithm research and implementation (notably a C++ tensor algebra library for efficient computation particularly with tensors having symmetries - https://github.com/leapmotion/tensorheaven); devised and implemented image-based gesture recognition (http://blog.leapmotion.com/quick-switch-swipe-vr-real-world-unity/); designed and implemented a C++ OpenGL framework library (not [yet] open sourced), designed and implemented the core gesture recognition and control for Touchless 1.0 (https://apps.leapmotion.com/apps/touchless-for-mac/osx).

VeriSign Inc.
Software Engineer
2005 - 2008 (3 years)

Notable work done here: Designed and implemented a compiler for a scripting language designed to drive the UI flow for the Sprint Picturemail software project I was on; designed and implemented a state machine to control a network connection manager; designed and implemented an expressive, high-level, C++-based framework for creating asynchronous unit and integration tests for the Picturemail software.

TKO Software
Software Engineer
2003 - 2005 (2 years)

Notable work done here: Worked on multiplayer portion of Electronic Arts game Medal of Honor: Pacific Assault: profiled and improved multiplayer network performance; designed and implemented multiplayer scoreboard; multiplayer gameplay prototyping. Lead gameplay prototype engineering for an internal [TKO, not EA] project using the Quake3 game engine.

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Education

University of California, Santa Cruz
Doctor of Philosophy (PhD), Mathematics · (2010 - 2013)

University of California, Santa Cruz
M.A., Mathematics · (2008 - 2010)

University of California, Santa Cruz
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