Makoto Sadahiro

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SKILLS

Expertise/experience in: Software Development and consulting in Scientific/Engineering Data Processing and Visualization, Immersive Environment Systems, ETL/Digitalization, Systems Operations, Development Operations (AWS, Kafka, Flume, Hadoop)

Software development in/with: OOP; Python, C/C++, Java, Fortran, shell script, Pig, 68k Assembly, Pascal, BASIC, Tcl/Tk, Lisp; CUDA, mySQL(API), FFmpeg, CAVElib, OpenGL, VRPN, Kivy, STL, Boost, GD, Motif; HTML, VRML

Spoken language: English (fluent), Japanese (native)

EXPERIENCE

Perfect Price **08/2015 - 08/2019, San Francisco, CA**

Software Development Engineer

- Developed internal tools , such as continuous integration, alerting, database migration (Python, Java, shell script; AWS, Hadoop; mySQL)
- Developed production tools for ETL, data pipelining/management (Python, Java, Pig, shell script; AWS, Kafka, Flume, Hadoop; mySQL)
- Managed AWS resources, created company system/network security, and got compliance (SOC2) certified

Halliburton | Landmark **06/2014 - 05/2015, Denver, CO**

Software Developer in R&D Seismic Data Processing (SeisSpace/ProMAX)

- Improved geophysical data processing software modules for the software suite (Java, C, Fortran, Shell Script, LISP)
- Developed GUI module management tool, enabling on-line secure/trusted module management (Java)

Software Developer, Summer Intern in R&D Graphics (Decision Space) **05/2013 – 08/2013, Houston, TX**

- Developed a gesture-based user-interface for multi-touch display, enabled complex but intuitive navigation in 3-D space (C/C++, Java)

The University of Texas at Austin, Jackson School of Geosciences **09/2012 - 05/2014, Austin, TX**

Graduate Research Assistant at Institute for Geophysics / EDGER FORUM

- Developed acoustic wave propagation modeling software with GPU, and performed analysis of optimization (C/C++, Fortran, CUDA)

The University of Texas at Austin, Texas Advanced Computing Center **07/2003 – 08/2012, Austin, TX**

Research Engineer/Scientist Associate in Scientific Visualization and Data Analysis

- Deployed CAVE system; large scale sgi systems with 360-degree 3-D stereo display and head tracking system, which involves with hard/software integrations and development, enabled one of very few operational immersive systems in the nation to display scientific data (C/C++, CAVElib, VRPN, Unix tools)
- Developed API and hardware for immersive environment, enabling missing functionality of immersive system, such as virtual keyboard, wireless connectivity with auxiliary keys/switches, and haptic feedback (C/C++, OpenGL, CAVElib, OOPic)
- Collaborated with on-campus researchers and developed parallel rasterization/composition tool for large scale spatially/temporally segmented finite element simulation data, which boosted processing time from “weeks” to “ minutes” (C/C++, STL, Boost)
- Developed seismic wave propagation modeling (post-stack 2-D reverse time) tool (C/C++, STL, Boost)
- Collaborated with on-campus researchers and developed server-side video processing engine to create meta-data, such as summary clip/thumbnails and scene change detection, which enabled first free video server in academia. (C/C++, GD, FFmpeg)
- Developed paint program to demo multi-touch-screen system, which was demoed at IEEE Supercomputing 2011 (Python, Kivy)

Hitachi Medical Corporation **01/2003 - 06/2003, Kashiwa-city, Chiba Japan**

Software Developer in MRI Systems

- Developed new features and maintenance of imaging/navigation software components (C/C++, Motif, etc)

The University of Texas at Austin, Oden Institute for Computational Engineering and Science **06/1998 - 01/2001, Austin, TX**

The Center for Computational Visualization

Research Engineer Intern / Undergraduate Research Assistant

- Built automated on-demand demo system for the visualization of scientific/engineering data repository
- Developed data processing and validation tools for multidimensional scientific/engineering data (C/C++, Tcl/Tk, shell script, VRML)

EDUCATION

M.S. Geosciences/Geophysics: The University of Texas at Austin, Jackson School of Geosciences
B.A, B.S. Computer Sciences: The University of Texas at Austin, Department of Computer Science
B.F.A. Photo/Electronic Imaging: University of Massachusetts Dartmouth, College of Visual and Performing Arts

HOBBY/INTEREST

Cycling, Radio-controlled Sailplane, Cello, GPU computing