Makoto Sadahiro

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SKILLS

Expertise/experience:

Software Development, ETL/Digitalization, Scientific/Engineering Data Processing and Visualization, Immersive Environment Systems

Environment:

Python, Go, C/C++, Java, Fortran, shell scripts, Pig, Assembly, Pascal, BASIC, Tcl/Tk, Lisp, HTML, VRML; CUDA, FFmpeg, CAVElib, OpenGL, VRPN, Kivy, STL, Boost, GD, Motif; AWS, Docker, Terraform; SQL, Kafka, Flume, Hadoop etc.

Spoken language:

English (fluent), Japanese (native)

EXPERIENCE

HouseCanary **01/2020 - 09/2022, San Francisco, CA**

Software Engineer in Data Platform Engineering

- Developed API for internal data platform infrastructure to serve web applications (Python, Go, shell script, SQL; AWS, Docker, Terraform)
- Developed automation for internal alarm/monitoring/logging/tracing configurations (Python, Go, shell script; AWS, Docker, Terraform)

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

Software Development Engineer / DevOps 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 as the company's AWS admin, created company system/network security
- Deployed/Implemented/documented all engineering-side requirements for SOC 2 certificate

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

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

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

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 GPU-based acoustic wave propagation modeling software with the performance optimization analysis(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 immersive environment (CAVE) system; 360-degree 3-D stereo display system with 10+ projector and head tracking system, which involves with both hardware/software integration and development, enabled one of very few operational immersive systems in the nation to display scientific data (C/C++, CAVElib, VRPN, Unix tools)
- Developed software/API/hardware for in-house-build systems, such as virtual keyboard and wireless connectivity with auxiliary keys/switches, and haptic feedback for the immersive environment, and multi-touch table screen (C/C++, Python, OpenGL, CAVElib, OOPic)
- Developed software tools and workflow for processing large-scale scientific data for visualization
- Supported researchers as a data visualization/analysis consultant for nation-wide academic high-performance computing network

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

Software Developer in MRI Systems

- Developed imaging software components of Hitachi MRI medical scanners (C/C++, Motif, etc)
- Developed test for Inter-vendors connectivity/compatibility (DICOM)

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 in Computational Visualization

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

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