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, NGINX etc.

Spoken language:

English (fluent), Japanese (native)

EXPERIENCE

Software Engineer in Data Platform Engineering, **HouseCanary**   01/2020 - 09/2022, San Francisco, CA

HouseCanary is 150 person start-up company, which serves various housing market data and valuations

- Developed for microservice data platform infrastructure to serve API endpoints   (Python, Go, shell script, SQL; AWS, Docker, Terraform, NGINX)
- Developed for the query quality monitoring infrastructure with tracing/logging across all data platform services   (Python,, shell script,
- Developed/Maintained for scaling/monitoring/alarm infrastructure across all data platform services   Go, AWS, Docker, Terraform, NGINX)

Software Development Engineer, Perfect Price   08/2015 - 08/2019, San Francisco, CA

Perfect Price is 10 person start-up, which serves optimal pricing data for e-commerce

- 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

Software Developer in R&D Seismic Data Processing (SeisSpace/ProMAX), **Halliburton|Landmark Graphics Corp.** 06/2014 - 05/2015, Denver, CO

Landmark Graphics is a branch of Halliburon (60K+ employees), which develops software suites for oil and gas exploration

- 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), **Halliburton|Landmark Graphics Corp**   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)

Graduate Research Assistant at EDGER FORUM, **The University of Texas at Austin**   09/2012 - 05/2014, Austin, TX

EDGER FORUM is a geophysics research group under Jackson School of Geosciences and Institute for Geophysics at The University of Texas at Austin

- Developed GPU-based code for the performance optimization and analysis of acoustic wave propagation model   (C/C++, Fortran, CUDA)

Research Engineer/Scientist Associate in Scientific Visualization and Data Analysis,

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

Texas Advanced Computing Center is one of the largest high-performance computing center, which serves open academia nationwide

- 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   (C/C++, FFmpeg, etc)
- Supported researchers as a data visualization/analysis consultant for nation-wide academic high-performance computing network

Software Developer in MRI Systems, **Hitachi Medical Corporation**   01/2003 - 06/2003, Kashiwa-city, Chiba Japan

Hitachi Medical Corporation is the manufacture of Hitachi's medical scanners

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

Research Engineer Intern / Undergraduate Research Assistant, The Center for Computational Visualization,

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

The Center for Computational Visualization is a research group, which specializes in the visualization of scientific/engineering data

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