

Kihyo Moon

Mathematician, Computer Programmer

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Sponsorship required to work in the US

WORK EXPERIENCE

Software Developer

LG Electronics - Seoul, South Korea - March 2010 to July 2011

Responsibilities

1. Participation in developing decoders for multi-layer software platforms in order to enable users to utilize software using diverse multimedia data. Especially, worked on porting open source software codec and managing existing codec such as AAC, FLAC decoders into the system's core engine.
2. Development of the multimedia player for audio and video codec for internal test. GUI is developed using Java and Eclipse RCP. Codec (already developed using C language) is ported into GUI using JNI (Java Native Interface). GUI includes screen and control buttons such as play, stop, pause, resume, fast forward and backward functions.
3. Participation in developing an augmented reality program which changes a screen angle according to an eye tracking for 3D TV demonstration program using OpenCV.

Software Developer

TmaxSoft - Gyeonggi - January 2008 to March 2010

Responsibilities

1. Participation in developing BMS Map GUI Editor. This is a GUI editor of Cobol and PI1. It has all the functions that common text editor has such as code formatting, coloring, auto-correction, keyword listing, grammar checking and so on. Lex & Yacc is used to implement grammar checking of Cobol and PI1. The result of source code is shown as a graphical view. This graphical view is shown in real time when source code is changed in text editor by users. Conversely, if a map is changed in GUI editor by users, new source code is generated in text editor in real time. This map editor is developed using Java, Eclipse RCP and SWT/JFace.
2. Participation in developing MAT (migration analysis tool). Migration is the project that moves from large scale and legacy mainframe systems to open systems such as Unix and Linux. It is risky, time-consuming and very expensive work. It migrates dataset, resources, application, database and so on. MAT analyzes resources required for migration. It is developed using Java.
3. Participation in developing development toolkit of Openstudio DEV/DEP. Openframe is a rehosting solution to migrate system automatically. Openstudio is a GUI tool to control Openframe and develop/deployment toolkit DEV/DEP. DEV/DEP consists of project management, text editor, compilation of Cobol and PI1 and deployment of compiled binaries. It is developed using Java and Eclipse RCP.

EDUCATION

Ph.D in Mathematics

Virginia Polytechnic Institute and State University - Blacksburg, VA
2011 to 2016

Master's in Mathematics

Korea Advanced Institute of Science and Technology - Daejeon, South Korea
2006 to 2008

Bachelor's in Computer Sciences

Ajou University - Suwon, South Korea
2001 to 2006

SKILLS

Programming languages: C language (10+ years), Programming languages: C++ (Less than 1 year), Programming languages: Java (3 years), Mathematics script languages: Matlab (main skill), Mathematica, Maple (5 years), Experience of database programming: MySql (Less than 1 year), Experience of web programming: HTML,CSS,PHP (Less than 1 year), Experience of Java technologies: Eclipse RCP (Rich client platform), SWT/JFace, JNI (Java native interface), JDBC (Java database connectivity) (3 years), Experience of Windows programming: WinAPI (Less than 1 year), Experience of parser generating: Lex & Yacc (Less than 1 year), Experience of computer vision library: OpenCV (Less than 1 year), Experience of programming in the Unix/Linux environments (10+ years), Experience of parallel programming: MPI (message passing interface) on cluster computer (Less than 1 year)

ADDITIONAL INFORMATION

24th Undergraduate Mathematics Competition, Nov. 2005, The Korean Mathematical Society
- Special Prize: Top 22 among non-math majors and top 61 in the nation