Yichuan Huang

Software Engineer at Facebook

Summary

N/A

Experience

Software Engineer at Facebook
November 2016 - Present

Graphic Software Engineer at Intel Corporation
August 2011 - November 2016 (5 years 4 months)

Own Media codec test content development and validation for Intel 4th – 6th gen GPU
- Developed and maintained HEVC and VP9 Random Test Generation Tool (RTGT) using C# and C++
- Worked with RTL team and SV team to generate random tests content using RTGT.
- Worked with Architecture team and RTL team to define focus test scenarios for HW ULT tests, performance tests, benchmark tests and corner case tests
- Deep understanding about JCT-VC's High Efficiency Video Coding (HEVC) SPEC, including Main Profile, Range Extension and Screen Content
- Deep understanding in Google's VP9 SPEC for PROFILE1 and PROFILE3
- Run Bullseye on all codec test content to check functionality coverage and provide coverage tests upon reports

Co-own hardware modeling of graphics project for Intel 6th Gen GPU
- Designed and developed C++ pipeline which models HW Media Codec
- Regressed focus tests and maintained the healthiness of Media Pipe
- Worked with micro-architects and architects on BSPEC definition for HEVC and VP9
- Supported RTL validation using data from Media Simulator and codec reference source code
- Run Valgrind on Media projects to detect memory leak and resolve them

Co-own open source compliance check
- Perform IP Scan on Media Simulator projects using Protex
- Worked with all other feature owners in IP identification and verification

Research Assistant
May 2010 - May 2011 (1 year 1 month)
- Shot videos for assigned experiment;
- Write program in C++ to seize important data from videos;

- Use R language to analyze important data.

System Intern at Utopiacompression Corp.

June 2010 - August 2010 (3 months)

- Develop efficient and effective implementations for advanced vision algorithms for assigned projects;
- Perform scientific research in the area of computer vision and pattern recognition techniques;
- Collaborate closely with other R&D scientists and engineers in develping and implementing solutions efficiently;
- Take an active role in implementing, testing, debugging and optimizing application codec;
- Codes maintenance and documentation for software developed.

Student Worker at Everybody's Kitchen, USC

February 2010 - May 2010 (4 months)

Prepare buffet for USC student from 8 am to 1 pm;

Education

University of Southern California

Master's Degree, Electrical Engineering (Multimedia & Creative Tech), 2009 - 2011

Zhejiang University

Bachelor, Information Engineering, 2005 - 2009

Activities and Societies: Student Research Training Program

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Linked in.

Contact Yichuan on LinkedIn