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Summary

Self-motivated, adaptable, independent individual in software industry with proven records for solving complex problems and delivering results, capable of working with limited supervision, pro-active in managing tasks and status

Quality Experience in building tools, flows, sdk in domains databases, compiler, cloud data centre

Professional Experience

ML-HLS-FPGA Consultant | Remote | Jan 2022-Present

- Built CNN, DNN and K-means **accelerator** with FPGA with **ML Compiler Pipeline** for automobile client
- **Accelerated delivery by 2 months** with solution requiring understanding of architecture, design and programming lang of customer requirement and reduction of human efforts.
- Iterated prototypes with 3 HLS design on **static, TVM** (interpreter) and TensorFlow-**MLIR**.

AMD-Xilinx | Senior Software Engineer in HLS Compiler | Dec 2016 – Nov 2022

- Built HLS LLVM **developer tools, SDK framework** and demo **applications** in Vitis
- Contributed to HLS-LLVM frontend and RTL-System C backend for FPGA Emulation
- Achieved speedup of more than 100% to team deliverables
- Achieved 92% of test suite bring up including unit test and apps for Patented Compiler
- Led Object Oriented model for Requirement Specification, designed & developed tool chain with end-to-end responsibilities in C++ and Python
- Sound Understanding of software development life cycles including Agile and Spiral
- Expertise in **architectural patterns** like multithreading, IPC, web services and **design patterns** from C++ Boost-STL, **automation** with python along with gdb **debugging**
- Good experience in coordinating and implementing tasks over local remote teams to deliver value

Progress Software | Software Engineer | March 2016 – Nov 2016

- Built SQL **Query Compiler** feature, dynamic sample statistics based on lex-yacc, C/C++
- Worked on Legacy source built over 15 years, bug fixing and debugging for CDC
- Contributed to Hack-a-thon for multithreaded query plan, less to 2 times speedup

Blaize (Thinci) | Software Engineer in GPU Compiler | June 2014 - Feb 2016

- Built LLVM tools, OpenCL- OpenVx **SDK** framework for Computer vision GPU hw startup
- Lead frontend library support end-to-end using C++ in pipelined architecture
- Designed test-suites from scratch for all frontend library mock ups
- Delivered value to customer in deadline with pair programming which led to 100 times fast low cost DNN models for customer

Project Co-ordinator | May 2018

- SQL-Data frame accelerator with **LLVM JIT Compiler** in columnar database Implementation
- Achieved 6 times speedup on execution and ~ 2 time less data movement of data

Education

- **Executive Alumnus, IIM Indore** (2023)
- *Certified Agile methodologist from Google.*
- **System Major**, MTech in Computer Science and Engineering, **IIIT Hyderabad**. (2014)
- **Distinction**, Bachelor of Engineering in Computer Engineering, **Pune University**. (2011)