Anirudh Prasad

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SKILLS

Languages: C | C++ | Perl | Shell Scripting | Verilog | Assembly

Databases: MySQL | SQL Server | Oracle SQL Developer

Environments: Windows | UNIX/LINUX | AIX

Tools & Frameworks: OpenDDS | ARM/x86 Processor Architectures | GDB/LLDB | POSIX | Git

WORK EXPERIENCE

NVIDIA   Santa Clara, CA
Embedded Systems Software Developer   Sept '18 - Dec '18
- Implemented a C++ publisher/subscriber communications library, supporting both aarch64 and x86_64 architectures, utilizing **C++11 multithreading/concurrency**
- Designed and implemented a service management and orchestration framework in **C++**, to enable **NVIDIA DRIVE (autonomous driving) applications** to coordinate and communicate with each other
- Executed various functional tests on the embedded NVIDIA DRIVE AGX Pegasus hardware platform

Apple   Ottawa, ON
Software Developer – Special Projects Group   Sept '17 - Dec '17
- Ported various functions of the **Newlib pthread library** to work with an **embedded real-time OS** for autonomous systems, with special emphasis on CPU affinity functions
- Implemented a fully functional **core dumping mechanism** in **C** to capture faulting threads and processes and write out core files
- Added automated **LLDB** support using **Python** to debug created core files
- Enhanced various functional tests written for kernel system calls

IBM Canada   Markham, ON
Compiler Developer   Jan '17 - Apr '17
- Optimized built-in functions in **C** and **C++** for the **POWER9 processor** in a LE Linux environment using compiler optimization strategies
- Wrote several Perl scripts to evaluate POWER9 processor performance using **SPEC Benchmarks**
- Executed functional and performance tests in BE and LE systems

The Nielsen Company   Markham, ON
Application Developer   May '16 - Aug '16
- Saved around **$700,000 annually** by designing and developing a data extraction application in **C# ASP.NET**, **Ext JS** and **SQL Server** to generate data reports
- Improved processing time from **2250+ hours** to **38 hours** by using an external cache to optimize Oracle and SQL queries and stored procedures
- Implemented various REST APIs in Ext JS to interact with SQL Server and Oracle SQL Developer

Clausehound Inc   Toronto, ON
Web Developer   Sept '15 - Dec '15

- Developed a web application using the **LAMP stack** that allows lawyers to publish and sell legal contracts
- Decreased the site load times by **40%** by making various front-end improvements to the site using **HTML5**, **CSS3**, **JQuery** and **AJAX**
- Increased user retention by **5%** by implementing a system that monitors site activities and utilizes the data to send notifications to users
- Integrated Stripe as a payment tool on the site, allowing users to make secure purchases

Metroland Media   Toronto, ON
Software Developer   Jan '15 - Apr '15

- Developed interactive web applications in **Yii** and **JavaScript** to display flyers and coupon deals to customers
- Added structured microdata to improve SEO by using Google Webmaster tools

PROJECTS

Smart Voice Assistant
github.com/aniprasad/Voice-Assistant

- Voice assistant that uses Microsoft's Speech to Text API to convert speech commands to functional calls
- Used various REST APIs to link voice commands and procure information
- Shows weather and sports information, plays songs, performs navigation and shows places of interests near locations, all controlled by voice commands

Music Player
github.com/aniprasad/Music-Player-Altera

- Implemented a music player on the Altera Max10 FPGA using C, with play/pause stop and rewind features
- Gained experience in embedded development, working with NIOS II, Quartus Prime and Qys

Kirsch Edge Detector

- Designed and implemented a Kirsch edge detector using VHDL
- Created DFDs and testbenches to determine the optimal multistage pipelined implementation
- Optimized project to maximize clock speed and minimize hardware used

EDUCATION

University of Waterloo

Honours Bachelor of Applied Science – Computer Engineering   Expected Apr '19

RELEVANT COURSEWORK

- Operating Systems
- Computer Networks
- Compilers
- Computer Architecture
- Distributed Systems