PRAVEEN V
M.Sc Data Science

"To Share, Enhance my Ideas in Computing with Experts and to serve the Humanity."

EDUCATION

June 2015 Current

MASTER OF SCIENCE – 7.48 CGPA
DATA SCIENCE,PSG COLLEGE OF TECHNOLOGY

June 2014 March 2015

HIGHER SECONDARY COURSE CERTIFICATE - 93.5%
SCIENCE & MATHEMATICS ,
EHKN MAT.HR SEC.SCHOOL

June 2012 March 2013

SECONDARY SCHOOL LEAVING CERTIFICATE - 99%
KONGU MAT.HR.SEC.SCHOOL

SKILLS

HPX
LLVM
STL
MongoDB
OpenCL

PROJECTS

FLOWGRAPH

An implementation of the **distributed graph** in HPX runtime system to unify graph-parallel and data-parallel computation similar to Apache **spark graphx**. Graphs are represented as distributed collection of vertices & edges using **HPX Component** abstraction. Vertices and edges have property(property graphs) associated with them. Computations on graphs are performed by data-parallel operators like **filter**, **map** and graph-parallel operators like **transform_vertex, transform_edge**. Graph parallel algorithms are built on top of the HPX parallel algorithms which will conform to the C++ standard algorithm API. **Asynchronous execution** of graph algorithm is possible by using hpx::future<T> overload.

XLR

A Machine Learning Project for finding Hidden Relationship between words of Different Languages e.g Words with same contextual meaning often come under the same cluster. Words are converted into higher dimensional vectors using Word2Vec Algorithm and its dimension is reduced using **t-SNE** (t-Distributed Stochastic Neighbor Embedding) technique.
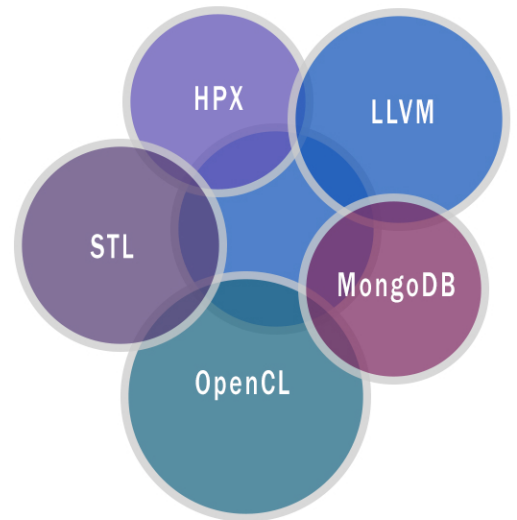
GO-HOME

A project using **Arduino Uno** board to build smart homes. It automates the household electronic goods such as light, fans according to user behaviour and maintains a good working state by adjusting to the external conditions such as temperature, light intensity using light detecting resistors and temperature sensors.
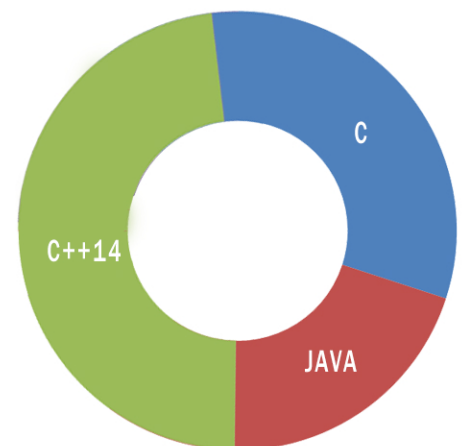
TENSOR

A **STL** like **Container** to represent multidimensional arrays in C++ using a Concept called **ZPL region**. Regions represent index sets of arrays and its layout in the memory. Multidimensional arrays are constructed from Regions. It is inspired by **mdspan proposal** to C++ standard, which provides facilities to represent multidimensional arrays and its interface. The implementation uses **PIMPL Idoim** by using C++ **Smart Pointers** and **strong typing**.

</> LANGUAGES

C
JAVA
C++14

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Praveen V

ACHIEVEMENTS & POSITIONS

Google Summer of Code 2017 - **STE||AR Group**, CCT, Louisiana State University.
Distributed Component Placement - Designed a Feature in **HPX** -C++ High Performance Computing Runtime System for Applications of any Scale for Distributing & allocating data objects over a cluster of nodes based on **Chapel Domain Maps** - an abstract concept for allocating index-based data structures over the cluster and designed an embedded domain specific language using C++ expression templates for expressing **data distribution** policies like Cyclic, Block, BlockCyclic.
https://github.com/pree-jackie/GSoC-HPx

Reporter at **STAPL** -C++ Parallel library Project at Parasol smarter computing, Texas.

Worked as junior student researcher in the field of **computer architecture**.

AWARDS

Secured **District Second & State Fourth** in State Board Exam.

Organized a technical workshop at Login (inter college event) for computer science students.

Finalist of Jarvis (Machine learning contest) at Shasstra 2017 IIT Madras.

LANGUAGES

ENGLISH

TAMIL

DECLARATION

I, Praveen V, do hereby confirm that the information given above is true to the best of my knowledge.

AREAS OF INTERESTS

HIGH PERFORMANCE COMPUTING

OBJECT ORIENTED PROGRAMMING
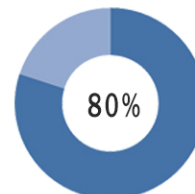
GENERIC PROGRAMMING MODELS

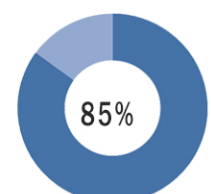*COMPILER OPTIMIZATION*

TOOLS

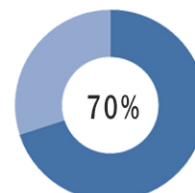*GIT/GITKRAKEN*   *LINUX*
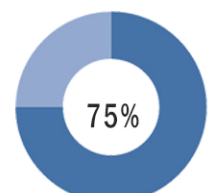
VALGRIND   *MATLAB*

RECREATION

80%
GAMES

85%
MUSIC

70%
CAFFEINE

75%
CYCLING

(Praveen v)

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