KEERTHI GOWDA B S

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EDUCATION

Virginia Tech *(Expected: May 2018)*
Masters in Computer Engineering

Relevant Courses: • Multiprocessor Programming • Video Game Design • Computer Vision

R V College of Engineering *(Aug 2009 – June 2013)*
Bachelor of Engineering in Electronics and Communication, **GPA: 3.6**

WORK EXPERIENCE

Cypress Semiconductor Corporation, India *(July 2013 – July 2016)*
Senior Applications Engineer

- Demonstrated proof of concept to remotely control a NERF blaster using an android phone over Bluetooth Low Energy. Used this demo to train Field Application Engineers and sales team of Cypress at Sales Training Conference – 2014, held at Seattle and Shanghai. Later, this demo was presented to customers to promote Cypress products. *(video)*
- Designed and developed a controller board for quadcopter with a motive to demonstrate most of the Cypress product portfolios like, microcontroller, flash memory, regulator, and programmer, with a single application. Cypress has now partnered with Mouser to make this board available for customers. *(link)*
- For quick sampling and development time of a product, I was supporting customers by developing application specific projects, exploring the feasibility of a design, creating proof of concepts, and debugging their projects. My area of focus was on communication protocols like I2C, SPI, UART and CAN, discrete logic design and firmware debugging. I was privileged to support the ex-CEO of Cypress, T J Rodgers, stood to his expectations and got his appreciation.

TECHNICAL PROFICIENCY

- C
- C++
- Matlab
- Java
- Javascript
- Eclipse

PROJECTS

Completely Fair Scheduler (CFS) (*Multiprocessor programming, java*)

- Implemented a CFS using the red-black tree to manage different processes which are competing against each other to access the shared critical section. The scheduler keeps track of the timeline for each process and serializes them based on the total time a process has executed in the critical section.

Concurrent Data Structures *(Multiprocessor programming, java)*

- Implemented linked list, queue, and hashmap in a concurrent system. To achieve data consistency, various coarse grain locks, fine grain locks and synchronization methods were used to handle multiple threads which are concurrently trying access the shared resource.

Game Design *(javascript)*

- Soccer: Designed Soccer game with different levels of difficulty based on the NPC's characteristics.
- Basketball: Designed a single player basketball game where the player would throw the ball by dragging the mouse into one of the four baskets that are scattered around the court.
- Dodge ball: The player has to shoot at the Non-Playing Characters (NPC) which is trying to dodge the incoming ball. The game had enough randomness making it hard for the player to predict the next position of NPC.

Converting Handwritten Mathematical Expressions to Latex *(matlab)*

- Built an automated system that extracts handwritten mathematical equations from an image and converts it into latex code. This simplifies the cumbersome process of manually typing the equations in latex which are prone to errors. Each symbol in an equation is classified individually using a trained classifier (Support Vector Machine) and the relation between the successive symbols is determined to reconstruct the equation.

AWARDS

- Best Breakout Session award at Cypress Sales Training Conference -2014, held in Seattle and Shanghai.
- Best Project Award at RVCE, ECE -2013, for the undergraduate final year project on Thin Film Transistors.