

Max Knutsen

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work

Facebook — SWE Intern

Summer 2016

Added caching mechanism to the NameNode server for Facebook's BLOB storage system. Restarting from cache cut startup time by more than fifty percent, allowing Facebook to react to outages and other emergencies quicker.

Migrated F4 to newer configuration system that supports dynamic changes. This increases the durability and flexibility of Facebook's warm storage system.

Added test module to Haystack to allow automated testing on the BLOB storage system router, which will ensure the fault tolerance of the distributed system.

Cougaar Software — SWE Intern

2014-2016

Implemented a health monitoring system in a distributed environment. Accompanying GUI was written with AngularJS and Vis.JS

Helped scale Cougaar's technologies to embedded systems and used those technologies to design and implement a distributed robotics framework.

Built a robot that used the distributed robotics framework to maintain connected water tanks. Used Raspberry Pis to task Arduinos to manage the sensors and actuators.

projects

Distributed Systems with Hadoop

Spring 2016

Hadoop data flow centered around Twitter's garden hose. Used Avro to encode Twitter data and used Kafka to move it between processing points on the data pipeline.

FloatBot

Fall 2015

Prototyped quadcopter that could to save drowning people. Used ROS, Open CV, and a modified AR.Drone 2.0.

Real Time Artificial Intelligence

Spring 2015

Developed a two dimensional game with an algorithm that reacts to the player's recent movements using modular action sequences.

school

University of Maryland, Baltimore County

Winter 2016

BS in Computer Science with an emphasis on robotics and big data.