Mehmet Savasci

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EDUCATION

University of Massachusetts (UMass) Amherst, Amherst, MA

PhD, Computer Science   Expected Graduation Date: August 2024
GPA: 3.81/4.0

University of Rhode Island, Kingston, RI

Master of Science, Electrical Engineering   2017-2019
GPA: 3.17/4.0
    Final Project Title: Implementation of Cloud Storage System based on Erasure Coding

Erciyes University, Kayseri, Turkey

Master of Science, Computer Engineering   2015-2017
    Completed coursework and English language study in preparation for U.S. M.S. degree

Bachelor's Degree, Computer Engineering   2015
GPA: 3.39/4.0
    Final Project Title: Real-time Object Detection Application

RESEARCH INTERESTS

- Cloud Computing, Distributed Systems, Datacenters, Application Profiling, Power-Performance Aware Auto Scaling.

RESEARCH EXPERIENCE

Using Control Theory for Adaptive Management of Power-Performance Tradeoffs in Cloud Data Centers

PhD Research, University of Massachusetts Amherst   Aug 2020 – Nov 2021

- Build controllers that is capable of managing the power-performance tradeoffs in web server clusters.
- This work is being planned to be submitted to MICRO'22 conference.

Latency analysis of (2,1) and (4,2) MDS coding techniques used in datacenters to keep data secure from server failures in terms of partial update operation

Master's Thesis Project, University of Rhode Island   Jan 2018 – May 2019

- Carry out latency analysis of two coding methods both theoretically and practically.
- Initially, using the Poisson process to model partial update requests. Exponential distribution is selected to model download and upload times. The Markov chain is a good model to show queue length pattern. Joining the shortest queue load balancing schema is determined as a load balancing method. All of them for theoretical analysis.
- Using Amazon AWS S3 with Java API for practical analysis. For practical analysis, download, upload, and partial update speed for (2,1) and (4,2) MDS coding techniques are measured.

Real time color analysis and fault detection of wet sugar which is under centrifuge
Master's Research Project, Erciyes University   Oct 2015 – Apr 2017
- As a part of team project, photographed wet sugar from production line in Kayseri Seker factory using Basler camera. Used Pylon C++ API to develop program to obtain images of wet sugar.
- Converted images into CIELAB color space.
- Performed statistical operations such as mean,variance, min, and max for each L, a, and b band of images. Curve fitting operation was done using these calculated values and sugar lab results.
- Used Qt framework to design user interface. Users selected region of interest (ROI) of the sugar before quality analysis starts. Then, for each video frame, selected ROI region was analyzed and the quality of sugar measured in real-time.

Real-time object detection application with OpenCV
Bachelor's Degree Final Project, Erciyes University   Feb 2015 – Jun 2015
- Stored object images prior to running program.
- Processed video frames in real-time and if they included stored objects, the object was pointed out and its name was displayed.
- Detected only one object per frame. There was no multiple object detection.
- Used SURF detector and decriptor to detect object. Used OpenCV library with C++.

Pharmacy on duty assignment, *Erciyes University*   Oct 2013 – Oct 2014
- Two part: Pharmacy on duty assignment side and user side.
- Used Java with framework provided by BFC Bilisim to develop an assigment application.
- Used Android SDK to list Pharmacy on duty to the user.
- Collaborated with BFC Bilisim for market research and marketing.

WORK EXPERIENCE

IT Department, Meliksah University   Kayseri, Turkey
Part-time   Aug 2014 – Apr 2015
- Developed online trainee registration system using ASP.NET and Microsoft SQL Server DMS.
- Used Telerik IU components for UI design.
- Provided technical support to students.
- Modified previously developed Bologna Process website using C#.

R&D Department, TUBITAK National Observatory   Antalya, Turkey
Summer Intern   Aug 2014 – Sept 2014
- Worked on inventory web application with JSF framework and MySQL database management system. Performed research regarding Hibernate ORM.

IT Department, TUBITAK National Metrology Institute   Izmit, Turkey
Summer Intern   Jun 2013 – Jul 2013

- Developed desktop application with Java programming language using client/server architecture. Carried out research about server, client, IP, and port.

Learner, Iltelis Advanced Technology   Kayseri, Turkey
Summer Intern   Jun 2012 – Aug 2012

- Learned C# and SQL DMS. Developed many desktop applications from basic to advanced with C# programming language and Microsoft SQL Server DMS.

TEACHING EXPERIENCE

Computer Science, UMass Amherst

Course: Teaching Assistants as Tomorrow's Faculty   Fall 21
Course: Using Data Structures   Fall 19, Spring 20, Fall 20, Spring 21, Spring 22

AWARDS

Graduate Research Fellowship, Turkey's Ministry of Industry and Technology   Feb 2016
Postgraduate Scholarship, Turkey's Ministry of National Education   Oct 2015
High Honors Degree, Erciyes University   Jun 2015, Jan 2015, Jan 2013
Honors Degree, Erciyes University   Jun 2014, Jan 2014, Jun 2012
Scholarship, Turkey's Ministry of National Education   Aug 2007

TECHNICAL SKILLS

- Programming Languages: Java, Python, Solidity, JavaScript, SQL, C#, C++, C, MATLAB
- Software: Visual Studio Code, Microsoft SQL Server, MySQL, Arduino IDE, Qt framework, Eclipse, NetBeans, JGrasp, Dynamips, MS Word, MS PowerPoint
- Operating System: Windows, Linux, Mac OSX
- API: OpenGL, Amazon AWS S3 Java API
- Others: JavaServer Faces(JSF), Android SDK, OpenCV, STM32L476VG MCU

CERTIFICATIONS

- University of Rhode Island Embedded Systems Certificate   Jul 2018
- Indiana University Bloomington (Bloomington, IN)   Jul 2017
  188 hours English education (05/08/2017 – 07/28/2017)
- Middle East Technical University (Ankara, Turkey)   Jan 2017
  1,200 hours English education (01/04/2016 – 01/13/2017)

EXTRACURRICULAR ACTIVITIES

- President of the Graduate Muslim Student Association at UMass   May 2021-Present
- Media coordinator of the ACM Club at the Erciyes University   2012-2013