

## YUSUF AYTAR

3041 Souther Pine Tr., Orlando, FL 32826  
E-Mail : [yusufaytar@gmail.com](mailto:yusufaytar@gmail.com) • Cellular: +1 (321) 279 2662

### EDUCATION

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- 2006 - present M.S. candidate in Computer Science, GPA : 4.0 / 4.0  
University of Central Florida, Department of Computer Science, Orlando, FL, US
- 2001 - 2005 B.E. in Computer Engineering, GPA : 87.65 / 100  
Ege University, Department of Computer Engineering, Izmir, Turkey
- 1998 – 2001 Private Yamanlar Science High School, Izmir, Turkey GPA : 4.86 / 5.00

### PROFESSIONAL EXPERIENCE

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- **University of Central Florida** , August, 2006 – present, Orlando, FL, US **Research Assistant**  
**Video Analysis and Content Extraction (VACE) Project,**  
A research project on high-level event representation and retrieval using probabilistic case frames is maintained. Some novel concept based video representations and semantic retrieval methods are developed. (*Semantic Video Retrieval, High-level Event Representation, Semantic Word Similarity*)  
**Kodak Project,**  
Contextual concept correlations are investigated for high-level concept detection. Some temporal motion features are extracted for action recognition using stationary cameras. (*High-level Concept Detection, Action Recognition*)
- **Siemens Corporate Research**, March – August, 2006, Princeton, NJ, US **Research Intern**  
Research conducted on merging semantic web technologies and workflow management systems. A prototype is implemented for on-the-fly workflow generation using BPEL processes. Contributed to “Adaptive Medical Workflow Using BPEL Process and Ontological Knowledge Base,” WWW2007 Workshops (*Semantic Web, Business Process Management, BPEL, Java*)
- **Cabot Communications**, July, 2005 – January, 2006, Izmir, Turkey **R&D Engineer**  
A new embedded DVB-S (Digital Video Broadcast - Satellite) system for satellite receivers is developed. (*Digital Video Broadcast Technologies, Embedded Programming, C Language*)
- **TUBITAK\*-BILTEN**, August – September, 2004, Ankara, Turkey **Summer Intern**  
A research was conducted on Photometric Stereo and 3D reconstruction algorithms. And a new hybrid method developed using gaussian surfaces as a combination operator for 3D reconstruction problem. (*Photometric Stereo, 3D Reconstruction, MATLAB, C++*)  
TUBITAK\* : National Research & Technical Council of Turkey
- **Private Yamanlar College**, Nov, 2001 – August, 2004, Izmir, Turkey **Coordinator of Informatics**  
Lectures on Advanced Data Structures and Algorithms were taught, targeting on National and International Olympiads in Informatics. And several computer science projects are supervised which won valuable grades in the national competitions. (*Advanced Algorithms & Data Structures*)

### PUBLICATIONS

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- J. Liu, Y. Aytar, B. Orhan, J. Han, and M. Shah , “ *Semantic Video Classification and Automatic Search*”, TRECVID Workshop, Gaithersburg, MD, US, 2007
- Y. Aytar, O. B. Orhan and M. Shah, “*Improving Semantic Concept Detection and Retrieval Using Contextual Estimates*”, In Proc. of International Conference on Multimedia & Expo (ICME’07), Beijing, China, 2007
- “*Implementation of a Flexible Infrastructure for a Communication System*”, BS Thesis, Ege University, Izmir, Turkey, July 2005

## PRESENTATIONS AND TALKS

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- “*Analysis of Genetic Algorithms*”, Turkish-German Summer Academy in Advanced Engineering, 2005
- “*Multi Layer Perceptron Networks*”, Ege Artificial Intelligence Group, Ege University, 2004
- “*Improving Semantic Concept Detection and Retrieval Using Contextual Estimates*”, in ICME’07, 2007

## AWARDS & ACHIEVEMENTS

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- 2006 – 2008, Awarded **Fulbright Scholarship(\$55,000)** for two years during Masters Education in Computer Science Department at University of Central Florida
- 2005, Ranked 3<sup>rd</sup> out of 78 graduates, in the Department of Computer Engineering at Ege University
- 2001, Won **bronze medal** in the National Olympiads in Informatics organized by National Research & Technical Council of Turkey
- 2000, Ranked **2nd** for project titled ‘*Constructing 3D Models via Stereo Images*’, National Project Competition organized by National Research & Technical Council of Turkey
- 1999, Won **honorable mention** for project titled ‘*Simulation of Intelligent Robot Population*’, National Project Competition organized by National Research & Technical Council of Turkey
- 1999, Won **silver medal** for project titled ‘*Simulation of Intelligent Robot Population*’, National Project Competition organized by Middle East College
- 1998 – 2001, Awarded **full scholarship** for three years from Private Yamanlar Science High School
- 1998, Ranked **113rd** in the Entry Exam for Science High Schools among more than 300,000 students
- 1995, Ranked **2nd** in the Entry Exam for Anatolian High Schools in Manisa, Turkey

## TRAINING CAMPS

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- August-September 1999, 3 weeks, Training Camp in Algorithms and Data Structures in C, organized by National Research & Technical Council of Turkey
- August 2005, 2 weeks, Participation to Turkish-German Summer Academy in Advanced Engineering
- June 2007, 1 week, Fulbright Science and Technology Seminar, “From Labs to the Markets”

## SELECTED SOFTWARE PROJECTS

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- 2001, An Interactive Education Portal for Algorithm Learning (*Php, Html, Mysql*)
- 2002, A Search Engine Based on B+ Trees (*C++*)
- 2004, A Generic MLP Neural Network Library (*C++*)
- 2004, An Optical Character Recognition System Using Artificial Neural Networks (*C++*)
- 2005, Analysis of Fabric Distortion by Different Needles via Image Processing (*C#*)
- 2005, Implementation of a Flexible Infrastructure for a Communication System (*BS Thesis, C++*)
- 2006, Adaptive Medical Workflow Generation Using BPEL Process , (*Java, BPEL*)

## LANGUAGES

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English: Fluent, Turkish: Native, German: Beginner

## ACTIVITIES

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- Member of **Computer Vision Lab** at UCF
- President (2007) and Secretary(2006) of **Student Association for Intercultural Dialog** at UCF
- One of the founders of **Ege Artificial Intelligence Group**
- A member of **YIS** (Yamanlar Informatics Society)
- A member of **Egenso** (Ege Engineering Society)
- Playing soccer, basketball, volleyball and table tennis as an amateur

## PERSONAL

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Date of Birth : 30.01.1983                      Place of Birth : Manisa / Turkey  
Marital Status : Single                      Nationality : Turkish  
Characteristics : Innovative, self-confident, detail-oriented, quick learner  
Research Interests : Semantic Video Retrieval, Computer Vision, Artificial Intelligence, Pattern Recognition