

OnurFerhat

computer scientist / engineer

contact

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languages

Turkish
English
Spanish
Catalan

programming

Python, C++, C#
JavaScript, CSS, HTML

education

2011–(2016) PhD in Computer Vision

Autonomous University of Barcelona

I have been working on **natural light gaze trackers** since 2011 under supervision of Dr. Fernando Vilariño. Our work is focused on implementing novel gaze tracking algorithms and making the trackers more robust and easier to use. The tracker's source code is shared openly at GitHub.

Apart from this main line, we are also collaborating with Dan Norton for interdisciplinary projects, using computer vision and eye tracking to create artistic **user interactions**. Our first joint project, Memory Fields, has the aim of presenting Spanish Civil War propaganda posters in a novel way and we presented it in Sonar +D 2015 and The Volpelleres Living Lab.

2011–2012 MSc in Computer Vision and Artificial Intelligence

Autonomous University of Barcelona

This one year master's degree programme enabled me to explore many areas of computer vision. Through the course of the year, I gained hands-on experience in fields including image processing, machine learning, and artificial intelligence. My final project was on natural light gaze trackers, which constituted the first step for my PhD thesis.

2004–2009 BSc in Computer Engineering

Bogazici University, Turkey

As one of the top computer engineering degrees in Turkey (for students in the top 0.03 percentile in university entrance examinations), my undergraduate studies provided me with a disciplined computer science education. In my final year, I studied more advanced topics such as **robotics**, **artificial intelligence** and **pattern recognition**. My senior project was on **reinforcement learning** for Aibo robots, in a simulation environment.

Apart from computers, I also found the opportunity to study other interesting topics such as Spanish (3 years), linguistics, advanced English and environmental science.

experience

2009–2011 **Banksoft - Payment Systems Solutions**
Software Developer

Istanbul, Turkey

I worked for almost two years in projects related to personalization (preparation for customers) of EMV-compliant chip cards for many major **Turkish and international banks**. My tasks included the management of customer data and security data, preparation of structured file outputs for mass-embossing of cards. I also completed a training on programming embedded applications for these cards.

In my second year, I developed two programs for the internal use in the company and made the lives of my colleagues easier. By quickly gaining experience in my tasks, I could participate in the project that revolutionized the (then) 15-year old company's legacy systems for personalization.

2008–2009 **Inveon**
Software Developer

Istanbul, Turkey

During my time at Inveon, I dived into **web technologies** and learned the **agile development** methodology. I worked on C# web projects for the internal use of many large Turkish companies from a **variety of sectors** (pharmaceutics, insurance, security, etc.). This way I could learn to adapt to customer needs and requirements, and also the different workflows employed in each sector.

2007–2009 **Nuna Localization**
Freelance Translator

Istanbul, Turkey

My high level of English and knowledge of computers allowed me to work as a freelance translator, specialized in the field of computers. The first project that I participated in was the translation of **Adobe Flash** user manual to Turkish, and I translated 100k words in around two months (summer of 2007). After the quality of this work, I could keep working for Nuna during the next two school years, in projects such as translations of various Microsoft products (including **Windows 7** manual and its Turkish web page).

honors & scholarships

2009	Honor Degree	Bogazici University
	Graduated with a GPA of 3.49 and awarded an honors degree.	
2004	Nationwide Success	University Entrance Exams (OSS)
	141st among around 1.5 million students in the university entrance exams.	
2001	Nationwide Success	High School Entrance Exams (LGS)
	5th among around 600 thousand students in the high school entrance exams.	
2011	Postgraduate Scholarship	Autonomous University of Barcelona
	4 year scholarship, including tuition for master's degree programme.	
1999–2009	General Scholarship	Turkish Education Foundation (TEV)
	Continuous TEV scholarship for ten years.	

publications

journal articles

A Cheap Portable Eye-Tracker Solution for Common Setups.

Onur Ferhat, Fernando Vilariño, F. Javier Sanchez

Journal of Eye Movement Research 7.3 (2014) pp. 1–10. 2014

conference proceedings

A Feature-Based Gaze Estimation Algorithm for Natural Light Scenarios

Onur Ferhat, Arcadi Llanza, Fernando Vilariño

7th Iberian Conference on Pattern Recognition and Image Analysis, 2015

Gaze Interaction for Multi-Display Systems using Natural Light Eye-tracker

Onur Ferhat, Arcadi Llanza, Fernando Vilariño

2nd International Workshop on Solutions for Automatic Gaze Data Analysis, 2015

A Cheap Portable Eye-Tracker Solution for Common Setups

Onur Ferhat, Fernando Vilariño

17th European Conference on Eye Movements, 2013

masters thesis

Onur Ferhat. “Eye-Tracking with Webcam-Based Setups: Implementation of a Real-Time System and an Analysis of Factors Affecting Performance”. Computer Vision Center, 2012.