



# Hesham Omran

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An independent consultant in UX and the internet of things, with an academic research background as assistant researcher and PhD candidate in Otto-Friedrich University of Bamberg, and earlier as a Master of Science graduate from RWTH Aachen University in Media Informatics, with a wide knowledge in multidisciplinary fields of human computer interaction, software development, and embedded systems. Received two awards from international HCI conferences for the years 2013 and 2014.

Interested in Human Computer-Interaction (**HCI**), UX Research, SW/HW development, Internet of Things and Enterprise & Business Application Development.

## WORK EXPERIENCE

### **hxd3 Independent Technology and UX Consultancy - Germany**

#### **Nov 2018 - Present**

- (1) Consulting companies, corporates and industrial plants in Egypt and Germany for digital transformation and user experience in industry 4.0. Analyzing and setting their process planning and pipelining to align their business with newest trends in technology of IoT, cloud, customer Experience design and Interactions. Leading and following up their implementation projects in scrum.
- (2) Helping companies with existing products or services to take their projects to the next level of interaction and experience design. Offering innovative prototypes implementation for showcasing or realisation of their service, product or platform for media and publications.
- (3) Offering workshops for design thinking and new technology trends depending on the industry to help in building team experience and awareness to drive innovation in the company.

### **Research Assistant & PhD Candidate in Informatics & HCI - Otto-Friedrich Universität Bamberg**

#### **Oct 2015 - April 2018**

- (1) Research in facial emotional recognition and presentation for Humanoid robots, as a part of the Emotional aware robots and user interaction initiative. Integrating various SDKs and APIs for creating a working emotional aware robots to serve distressed people.

- (2) Working on context aware research for better understanding of the user activities during interacting with their computers and mobile devices, including using environmental sensors and machine learning to understand user behavior, for enhancing user experience.
- (3) Teaching and mentoring multidisciplinary team of students from different faculties of informatics and humanities for HCI project courses and supervising master theses.

### **Senior Developer & Consultant - Single Projects, Germany & Egypt**

**2014 - 2015**

- (1) helping teams to better handle their work process via CRM systems through usability testing and UX interviews and reviewing their work processes and workflow, to find the most appropriate technology to meet their needs, without disrupting their current workflow. Trained the team on how to build reports, and how to manage their data and interactions with the customers online.
- (2) Helping businesses to connect to their warehouses and data centers, to better monitor the functionality and performance of their assets, and provide them with various tools and mobile user interfaces for fast decision making and awareness.

### **Researcher and Software Developer - Germany & Egypt**

**2010 - 2013**

Worked as a researcher and developer in software systems, specially cloud based systems in Fraunhofer FIT, Germany in 2012 for helping users with visual challenges to be able to interact with computers, as the computer adapt to their handicap. As I also worked in the American University in Cairo as an undergraduate since 2010 to integrating their internet based service with their educational ERP system to help migrate their legacy software with the new system.

## EDUCATION

### **RWTH Aachen University, Germany 2011 - 2014**

(MSc Media Informatics)

**Master Thesis** - Using **motion capturing (VICON), KINECT, User Studies, and Rapid Prototyping techniques** to evaluate the proprioceptive ability of the human thumb over finger interaction for text typing over the hand.

### **German University in Cairo, Egypt 2004 - 2009**

(BSc. Digital Media Engineering)

## AWARDS

**UIST 2014 Student Innovation Contest**

### **3rd place Most Creative Award for Vacuum Dance Revolution**

Combining software and electronic circuits, and internet connectivity to create a tangible gaming experience.

<http://hci.rwth-aachen.de/VDR>

### UIST 2013 Student Innovation Contest

#### 1st place People's Choice Award for WaterPong

A software and hardware table using objective C, openCV and C++ to create an interactive social gaming tabletop interaction using programmable water pumps and projected digital GUI. (Funded by RWTH Aachen Undergrad Fund)

<http://hci.rwth-aachen.de/waterpong>

## SIDE PROJECTS

I am always keen on giving back to the community, I run a couple of open source projects on my personal github to help developers and students alike in various disciplines and fields.

**Github account** with different projects including Emotional NAO Robot connections, AffectiChat (Emotional Text Chating) ... etc. varying between different languages e.g. python, Java and NodeJS

<https://github.com/firelin>

**Instructables.com** : Instructables.com is a website specializing in do-it-yourself articles and projects, which other users can comment on and rate for quality. I publish often my recent project with more than 76,000 views and more than 500 favorites.

<http://www.instructables.com/member/HeshamO/>

**Fuzzinator**: Open Source Fuzzy Logic Controller. using **C#** and **.NET Framework**. The project has more than 65,000 views and around 5000 bookmark on [CodeProject.com](http://CodeProject.com).  
**\*\*Software class diagram is included.** Making it easier for non technical users to program a fuzzy logic controller.

<http://www.codeproject.com/KB/recipes/Fuzzinator.aspx>

## VOLUNTEER

**VESTED Summit** - attended the summit as a technical mentor for block chain and IoT, also used my previous experience with teaching university students and researches in building user centric design of their applications and ideas **(2018)**

Technical and User Interaction **Mentor**, and internet of things **expert** at Maker Hackathon Cairo in Egypt, helping young entrepreneurs to design and realize their conceptual ideas for their final pitch. **(2015)**

UIST **Student volunteer**, chosen through a design contest for T-Shirts of the student volunteers at ACM UIST Conference 2014, which I won. provided AV support, organization of the travels outside the conference and allocation of the people, helping speakers with their material and presentation preparation. **(2014)**

## Publications

Omran, H. & Gross, T., (2016). An Explorative Study on Requirements for Ambient Displays Presenting Mood Awareness. In: Prinz, W., Borchers, J. & Jarke, M. (Hrsg.), Mensch und Computer 2016 - Tagungsband. Aachen: Gesellschaft für Informatik e.V.]

<https://dl.gi.de/handle/20.500.12116/190>