



MOHAMMAD SHAKER

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BACKGROUND

Born in Damascus, Syria in Oct 6th, 1990 as a Designer and in 2013 graduated as a Computer Scientist. I got best of both worlds. While traveling between Denmark and France to complete my master program in Human-computer Interaction, I've started my own work on games and apps by kick-starting [Strong Emotions](#); Later in 2016, I started working at Squla, a Dutch startup delivering a fun education platform for children to learn as they play. I thrive for what makes impact on people lives. I'm interested in design, games, education and entrepreneurship.

EDUCATION

- **MSc. in Human-Computer Interaction and Ubiquitous Interactive Systems** 2014-2015
Joseph Fourier University, Grenoble, France.
- **BEng. in Information Technology Engineering and Artificial Intelligence** 2008-2013
Faculty of Information Technology Engineering, University of Damascus, Syria.

HONORS

- **Tier1-Exceptional Talent** Oct 2017
Endorsed by TechCity UK as an Exceptional Talent in the UK and awarded 5-year visa in that respect.
- **Albasel Award for Academic Excellence** 2013, 2012, 2011
Awarded the most prestigious award for academic excellence three times in a row in my bachelor program at the Faculty of Information Technology Engineering, University of Damascus, Syria.

EXPERIENCE

- **Software Engineer - Squla** Q3 2016 -Now
Working with Unity3D engine in frontend and python and SQLAlchemy in the backend. Developing an education platform for children to both learn and play. [Squla is one of the five fastest growing startup in the Netherlands.](#)
- **Cartoonist and Author** Q1 2017 -Now
In April 2017, I published my first book called "Don't Think about Red Milk" in Arabic. I designed, drew and wrote the book. It's the first Arabic book on Behavioral Economics for the masses with comics, dialogues, traps and bursty colors. Download it [here](#).

- **Game Developer - Strong Emotions**

Developing my own ideas into games and apps for the masses, end-to-end. Released [Thex](#), [Paper Ski](#), [Flopp](#) and [SyncSeven](#) on Google Play and another [7 prototypes](#). Also responsible for UI/UX re-design of Menura.

Q2 2014
-Now
- **Researcher in Artificial Intelligence - IT University of Copenhagen, Denmark**

Developing and implementing novel ideas in the domain of procedural content generation, machine learning and novel creativity tools in games. 10 research papers in main conferences have been published to date with 4 nominated for best paper award.

Q1 2013
Q2 2015
- **Development Specialist - Syriatel (the Largest Telecom Company in Syria)**

Ramping old frameworks into SaaS model. I designed and implemented Hermes framework and Project Theia. Hermes is an MVC-based, web framework for automated services and Theia is a realtime interactive monitoring system for Syriatel.

Q1 2014
- **Instructor - Sham Institute and Alnekhba Institute**

Teaching 25+ courses for more than 700 learners in the domain of programming languages, mobile applications, computer graphics and game engines. The courses range from 8 to 12 days each, 2h/day. All courses are available online on [slideshare](#).

2011-
2015

INDEPENDENT PROJECTS [full list on [my website](#)]

- **[Don't Think about Red Milk](#)**: I cultivated my love for art, drawing, design, human-behavior and my own study in Human-Computer Interaction to give such a small contribution back to my own people. *Don't Think about Red Milk* is a strange Arabic book with no page numbers and with weird index. It's a very easy 2-hour read filled with comics, cartoons, dialogues and traps that makes you question every single topic. Its vibrant colors, crazy drawings, easy language and deep meanings makes it easy for the Arab youth to widen their view on such an important topic that effects how they look about life, relationships and work.

Q1 2017
- **[Android Games and Apps](#)**: Released 4 Android games, end-to-end, using Unity3D ([Thex](#), [Paper Ski](#), [Flopp](#) and [SyncSeven](#)) and another [5 prototypes](#). I was also responsible for the re-design of UI/UX of Menura Android app. [Unity3d, C#, Java, Matlab, Audio Processing, Facebook API, Twitter API, Google Play Services, Parse Cloud Service]

Q2 2014
-2016
- **[Selene Framework](#)**: I built *Selene* as a framework for building rhythm-based, procedurally generated games on top of the Unity3d game engine. All my Android games was built on top of it. [Unity3d, C#, Java, Matlab, Audio Processing, Facebook API, Twitter API, Google Play Services, Parse Cloud Service]

2015
-Now
- **[Hermes for Automated Services](#)**: Hermes is an MVC-based, web framework for supporting Point-of-Services for Syriatel. [ASP.NET, C#, Reflection, JS, jQuery, WCF, Oracle DB, SQL Server]

2014
- **[Project Theia](#)**: Theia is realtime monitoring system for Syriatel. Its main purpose is to monitor the status of POSs' supplies and demands in realtime. [C#, WPF, WCF, SQL Server]

2014
- **[Ropossum Authoring Tool, Procedural Content Generation for 2D Physics based games](#)**: Advancing the state-of-the-art, Ropossum is the first evolutionary-based authoring tool (and framework) for the generation of playable content for physics-based games such as Angry Birds and Cut the Rope. 5 papers have been [published](#) to date. [C#, Java, XNA]

2013
- **[CRUST 2D & 3D Rigid Bodies Physics Engine](#)**: A physics engine (rigid bodies, hard constraints, springs, rods, water, dynamic constrains ...etc.) fully functional and optimized with a simple user interface. CRUST is used in Ropossum and another augmented reality project. [C#, XNA]

2012

- **Personalizing Content Generation in First Person Shooter Games through Player Modeling:** Procedurally generating levels for First Person Shooter games using machine learning techniques (Neuro-evolution Preference Learning and Emotions Modeling.) [Cube Engine, C++, Java, Matlab] 2012
- **Radio Frequency Identification (RFID) Real-time 3D Tracking System:** The system enables realtime monitoring of an organization using RFID tech, 3D mobile and web environments. The system was implemented in the University of Information Technology in Damascus, Syria. [C#, WCF, SQL Server, WPF-3D] 2011
- **Car Dynamics Simulation with ABS, ESP and GPS Systems:** A car physics simulator in 3D. ABS, ESP braking systems and GPS system have been implemented with a user interface and a joystick controller. [C#, XNA] 2010
- **[Lead] Immersive 3D Environment using Kinect and Voice Commands:** Enables the designer/gamer to design his own 3D world with his own hands and voice. [Unity3d, C#, Kinect] 2014
- **[Lead] Weebee on a Mission:** is a serious game that can detect, track and change the child behavior. [Unity3d, C#] 2014
- **[Lead] Infinite Spelunky, Procedural Content Generation for 2D Dungeon Games:** A new state-of-the-art approach for procedurally generating levels for Spelunky; the famous 2D dungeon game. [Game maker, Java] 2013

PUBLICATIONS

Journals

1. Mohammad Shaker, Mehdi Zonjy, and Mhd Hasan Sarhan, Ismaeel Abuabdallah and Noor Shaker. **Personalizing Content Generation in First Person Shooter Games through Player Modeling.** To appear, 2017. 2016

Conferences

2. Noor Shaker, Mohammad Shaker and Mohamed Abou-Zleikha. **Towards Game-Independent Models of Player Experience**, in Proceedings of Artificial Intelligence and Interactive Digital Entertainment (AIIDE 15), 2015. 2015
3. Noor Shaker, Mohamed Abou-Zleikha and Mohammad Shaker. **Active Learning for Player Modeling**, in Proceedings of the 10th International Conference on Foundations of Digital Games, 2015. 2015
4. Mohammad Shaker, Noor Shaker, Julian Togelius and Mohamed Abu-Zleikha. **A Progressive Approach to Content Generation**, in Proceedings of EvoGames: Applications of Evolutionary Computation, Lecture Notes on Computer Science, 2015. **Nominated for best paper award.** 2015
5. Walaa Baghdadi, Fawzyah Shams Aldeen, Rawan Al-Omari, Zeina Alhalwani, Mohammad Shaker and Noor Shaker. **A Procedural Method for Automatic Generation of Spelunky Levels**, in Proceedings of EvoGames: Applications of Evolutionary Computation, Lecture Notes on Computer Science, 2015. **Nominated for best paper award.** 2015
6. Mohammad Shaker, Noor Shaker, Mohamed Abu-Zleikha and Julian Togelius. **A Projection-Based Approach for Real-time Assessment and Playability Check for Physics-Based Games** in Proceedings of EvoGames: Applications of Evolutionary Computation, Lecture Notes on Computer Science, 2015. **Nominated for best paper award.** 2015
7. Noor Shaker and Mohammad Shaker. **Towards Understanding the Nonverbal Signatures of Engagement in Super Mario Bros**, in Proceedings of the 2014 Conference on User Modeling, Adaptation and Personalization (UMAP 2014), 2014. 2014

8. Mohammad Shaker, Noor Shaker and Julian Togelius. [Evolving Playable Content for Cut the Rope through a Simulation-Based Approach](#), in Proceedings of Artificial Intelligence and Interactive Digital Entertainment (AIIDE 13), 2013. [[Poster](#)] 2013
9. Mohammad Shaker, Noor Shaker and Julian Togelius. [Ropossum: An Authoring Tool for Designing, Optimizing and Solving Cut the Rope Levels](#), in Proceedings of Artificial Intelligence and Interactive Digital Entertainment (AIIDE 13), 2013. 2013
10. Mohammad Shaker, Mhd Hasan Sarhan, Ola Al Naameh, Noor Shaker and Julian Togelius. [Automatic Generation and Analysis of Physics-Based Puzzle Games](#), in Proceedings of the 2013 IEEE Conference on Computational Intelligence and Games (CIG 2013), 2013. **Nominated for best paper award.** 2013
11. Noor Shaker, Mohammad Shaker, Ismaeel Abuabdallah, Mehdi Zonjy, and Mhd Hasan Sarhan. [A Quantitative Approach for Modeling and Personalizing Player Experience in First-Person Shooter Games](#), in the Extended Proceedings of the 2013 Conference on User Modeling, Adaptation and Personalization (UMAP 2013), 2013. [[Poster](#)] 2013

TOOLS

Programming Languages	C#, Java, C++, VB, Pascal, Prolog, LISP, Matlab
Mobile Development	Android, Windows Mobile
Web Development	JavaScript, Bootstrap, Python, AngularJS, ASP.NET, WCF
Engines and Graphics	Unity3d, OpenGL, XNA, WPF

LANGUAGES

Arabic	Native
English	Bilingual proficiency (TOEFL PBT: 590)
German	Limited working proficiency
French	Elementary proficiency

INTERESTS

Elon Musk • Minimalism • Nissan GT-R • Sports • LEGO • Books • Green Tea • Beauty • Watches • Languages