Turki Alelyani

Najran University, College of Computer Science and Information Systems
Najran - Saudi Arabia − P.O.Box : 1988
☏ +966 554446516 • ✉ tnalelyani@nu.edu.sa
⌂ personal.stevens.edu/ talelyan/

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Research Interests

Crowdsourcing, Users Experience Analysis and Design. Users Behavior and Engagement. Software Engineering, Machine Learning, Data Analytics, and Human Computer Interaction.
Theories I explored:
○ *Socio-Technical Design, Self-Determination Theory, Theory of Planned Behavior.*   ,

Education

Stevens Institute of Technology   **Hoboken, NJ**
Ph.D. in Software Engineering,   *[September 2015– August 2019]*
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Major Courses: *User Experience (UX), Machine Learning, Natural Language Processing, System Thinking, Risk Analysis, Qualitative and Quantitative Research, Survey Design, Software Engineering, Business Requirements Software Requirements.*

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Stevens Institute of Technology   **Hoboken, NJ**
Master of Science in Computer Science,   *May 2014*
Major Courses: *Human Computer Interaction, Database Systems, Data Mining, Cyber Security, Operating Systems, Cloud Computing, Software Engineering, Object Oriented Analysis and Design, and Computer Networking*

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King Khalid University   **Abha,Saudi Arabia**
Bachelor of Science in Computer Information Systems,   *July 2010*
Final Project: *Developing Electronic Shopping Cart using PHP, HTML, CSS*

Honors and Awards

○ Selected as a representative of graduate students at the Student Advisory Board, Stevens Institute of Technology, April 2016 − Present.
○ Awarded the first place among graduate students in Student Research Showcase, New Jersey Institute of Technology, April 2015
○ Full scholarship for the Master and Ph.D. degrees, 2011 and 2015

Experience

System Engineering Research Center (SERC)   **Hoboken**

- *Research Assistant at the System Engineering Research Center*   *January 2018–December 2018*

Project 1: This project was funded by the United States Department of Defense which aims to forecast technological changes and its impact via data analytics techniques in order to support high managerial decision making. That includes reviewing the current working products and how they can be improved

Project 2: This project aims to propose a Metrics-Based Approach for Managing COTS-Based Cyber Physical Systems. Extensive analytics are done on related work to propose effective approaches.

Stevens Institute of Technology   **Hoboken**

- *Lecturer at the Department of Computer Science*   *September 2016–December 2016*

Working with students on real world problems by applying Data Mining techniques for prediction, classification and clustering.

New Jersey Institute of Technology   **Newark**

- *Research Assistant at the Social Interaction Lab*   *September 2014–June 2015*

Conducting Research on topics related to Human Computer Interaction. Major courses: User Experience Design,Information Systems Principle, Social Networks and Quantitative Research Methods.

Stevens Institute of Technology   **Hoboken**

- *Teaching Assistant at the Department of Computer Science*   *September 2013–May 2014*

Data Mining principles for graduate students class.

Certificates

- Teaching at the College Level program, Stevens Institute of Technology, April 2016.

- Database Systems: relational database management systems (RDBMSs), SQL, MYSQL, King Khalid University, January 2010

- Project Management: learned how to plan, organize, secure, manage, lead, and control resources to achieve specific goal, Microsoft VISIO, KKU, December 2009

- Computer Networks: network protocols, TCP/IP, UDP, architectures, and applications, community college, October 2008

Publications

- [P1] Turki Alelyani, Arup Guha, Shion Guha and Pamela Wisniewski "Examining Parent versus Child Reviews of Parental Control Apps on Google Play."The 21st International Conference on. Human-Computer Interaction, 2019, Orlando, Florida.

- [P2] Turki Alelyani, Ye Yang, Jon Wade, Dinesh Verma, Martin Törngren, Ronald Michel " A Literature Review on Obsolescence Management in COTS-Centric." The 17th Annual Conference on Systems Engineering Research, 2019, Washington DC.

- [P3] Ye Yang, Jon Wade, Dinesh Verma, Martin Törngren, Ronald Michel, Turki Alelyani" Towards a Taxonomy of Technical Debts for COTS-Intensive Cyber Physical Systems." The 17th Annual Conference on Systems Engineering Research, 2019, Washington DC.

- [P4] Turki Alelyani, Paul T. Grogan and Ye Yang "Software Crowdsourcing Design: An Experiment on the Relationship between Task Design and Crowdsourcing Performance."The Journal of Systems and Software, 2018. under review

- [P5]Turki Alelyani, Ye Yang and Paul Grogan"Understanding Designers Behavior in Parameter Design Activities." ASME 2017 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference. American Society of Mechanical Engineers, 2017.
- [P6] Turki Alelyani, Ke Mao and Ye Yang "Context-Centric Pricing: Early Pricing Models for Software Crowdsourcing Tasks." The 13th International Conference on Predictive Models and Data Analytics in Software Engineering Nov 8, 2017 Toronto, Canada.
- [P7]Turki Alelyani, and Ye Yang. "Software Crowdsourcing Reliability: an Empirical Study on Developers Behavior." Proceedings of the 2nd International Workshop on Software Analytics. ACM, 2016
- [P8] Ye Xiong, Turki Alelyani, Regina Collins, and Starr Roxanne Hiltz. "Not Just Silly Cat Videos: Exploring Student Knowledge Sharing via Social Media." Proceedings of the Twenty-first Americas Conference on Information Systems, Puerto Rico, 2015

Research Projects

- Applying Machine Learning Techniques including Deep Learning to Understand the Effect of Social and Technical Conditions on Software Crowdsourcing Developers Engagement and Performance
- Metrics-Based Approach for Managing COTS-Based Cyber Physical Systems
- Crowdsourcing Task Design: an Experiment on the Relationship between Software Crowdsourcing Design and Workers Performance. In this project, I developed a software tool called "SoftCrowd" that can be used by crowdsourcing software developers to register and submit tasks. Also, it allows crowd participants to interact with the project manager and their peers through a designed system. The aims of this study is to understand the impact of social and technical conditions on crowd behavior and tries to reconcile the gap between software crowdsourcing and traditional software engineering strategies
- Studying Software crowdsourcing task design via projects requirements by Applying Natural Language Algorithms to understand the quality of the task design
- Exploring Relational Tensions between Parents and Teens in online systems by analyzing Google Play reviews
- Software pricing on crowdsourcing platforms. Predication models were conducted to estimate software pricing. Text mining was applied on software requiremnts to extract the features

Previous Projects

- Understanding Developers Behavior and Engagement at Topcoder.com, May 2016
- Designers Behavior working on parameter design activities
- Sentiment Analysis on Twitter Data: The satisfaction of customers who use Glaxy S5 mobile phone, Stevens Institute of Technology, April 2014
- Integrating R and Excel: Making advantage of R and Excel as analysis tools to get new GUI to allow users who are not interested in programming to use this tool, Stevens Institute of Technology, October 2013

Skills

- Python, R, SPSS, SQL, HTML, Gephi, Axure, Photoshop.
- Teaching Skills.

- Leadership Skills.
- Presentation Skills.
- Fluent English, Fluent Arabic.

Research Methods

- Machine Learning: Text Mining, Natural Language Processing (NLP), Predictive Models, Features Extractions.
- Behavioral Analysis.
- Survey, Qualitative Research, Quantitative Research,Competitive Analysis .
- Contextual Inquiry, Think Aloud, Personas-Scenarios, Storyboarding,Rapid Prototyping,Usability Testing.