Sonia **Baee**

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Pro**file**

I am starting my third year as a Ph.D. student at the University of Virginia in the Department of System and Information Engineering, working with Dr. Laura Barnes. In our research, we use mobile sensing technology, and the associated contextual data in mental health domain to deliver just-in-time prompts to individuals to promote right actions for their situation. Currently, I am working on prediction of drop-out from the study by using individual behavior pattern. We would like to give the right treatment in the right time to each participant. We are planning to use digital coaching to address idiosyncratic physical, behavioral and psychological processes of individual users to optimize utilization, compliance, efficacy, and maintenance.

Edu**cation**

University of Virginia
Charlottesville, Virginia

PhD in System and Information Engineering - Advisor: Laura Barnes
August 2017 - Present

- Project: Conversational agent in mental health
- GPA: 3.98

Amirkabir University of Technology
Tehran, Iran

M.S. in Computer Science - Advisor: S. Mehdi Hashemi
2011 - 2013

- Thesis: Improve Patient's Satisfactions by using Electronic Medical Records and Building Management Systems (sensors)
- GPA: 18.26/20 (Thesis grade: 19.5/20)

Amirkabir University of Technology
Tehran, Iran

B.S. in Computer Science - Advisor: S. Mehdi Hashemi
2007 - 2011

- Thesis: A New Urban Train Boarding/Alighting Strategy Proposition Using Passengers Micro-Movement Modeling
- GPA: 18/20 (Thesis grade: 20/20)

Exp**erience**

Graduate Research Assistant
August 2017 - PRESENT

University of Virginia

- Digital Coaching: how to use conversational agent to optimize utilization, compliance, efficacy, and maintenance of mental health program?
- Managing Anxiety: how does cognitive behavior modification change anxious person's behavior?
- Attrition: how to detect a participant is planning to leave the study at right time
- Mental-health framework: how to detect person's loneliness based on their text communication
- MindTrail project: Data analysis for finding patterns of user's behavior and response
- Emotion regulation: how anxious people regulate their emotion based on location and EMA

Researcher
Sept 2015 - July 2017

Knowledge Representation Lab - Texas Tech University

- ALM: creating a compiler for modular action language

Software Developer
2011 - 2014

ITS - Amirkabir University of Techonolgy

- Business Intelligent: how to recommend the product to the user based on their history of orders
- Intelligent Parking: develop a system to show vacant spots in parking for reservation

Researcher
2011 - 2013

NORC - Amirkabir university of Technology

- Energy Management in Hospital: Resource allocation
- Decision Support System: dynamic resource allocation for assigning clinicians to patients

Tea**ching**

Teaching Assistant, Amirkabir University of Technology
Fall 2011

CS 1316104: Principle of Computer 2

- Developed the assignments, final project and grade them
- Held office hours

Teaching Assistant, Amirkabir University of Technology
Spring 2011

CS 1316004: Principle of Computer 1

- Developed the assignments, final project and grade them
- Held office hours

Co-Instructor, Amirkabir University of Technology   *Spring 2012*

CS 1316163: Principle of Software Design
- Developed some of the assignments, final project and grade them
- Developed course instructions and course materials

Guest lecturer, Texas Tech University   *Fall 2016*

CS 2413: Data Structure
- Teaching different types of search algorithms

Publications

2019	**SocialText: A Framework for Understanding the Relationship Between Digital Communication Patterns and Mental Health.**, Mendu, S., Boukhechba, M., Baglione, A., Baee, S., Wu, C., Barnes, L., 2019, January. In 2019 IEEE 13th International Conference on Semantic Computing (ICSC) (pp. 428-433). IEEE.
2019	**Web-based Interpretation Training for Anxiety: Testing Target Engagement and Effectiveness for a Treatment Seeking Community Sample**, Ji, J.L., Baee, S., Zhang, D., Meyer, J., Barnes, L.E., Teachman, B.,Under review
2019	**Do I feel better or do I think I feel better? The effectiveness of emotion regulation strategies depends on how effectiveness is measured**, Daniel, K., Baee, S., Barnes, L.E., Teachman, B.,Under review
2019	**What is effective? Assessing different aspects of emotion regulation effectiveness in daily life.**, Daniel, K., Baee, S., Barnes, L.E., Teachman, B.,Regulating Emotions Effectively: New Approaches to Understanding Effects of Time, Person, and Development. Symposium to be presented at the Association for Psychological Science Annual Convention,Washington, D.C.
2018	**A social cognitive theory-based framework for monitoring medication adherence applied to endocrine therapy in breast cancer survivors.**, Boukhechba, M., Baee, S., Nobles, A.L., Gong, J., Wells, K. and Barnes, L.E., 2018, March. In IEEE-EMBS International Conference on Biomedical and Health Informatics. IEEE-EMBS International Conference on Biomedical and Health Informatics (Vol. 2018, p. 275). NIH Public Access.
2012	**Passenger Boarding/Alighting Management in Urban Rail Transportation**, Baee, Sonia, Eshghi, F., and Hashemi, S. M.,2012 Joint Rail ConferencePhiladelphia, Pennsylvania, USA, April 17-19

Skills

Programming	Python, Java, R, C/C++, SQL programming
Web	Angular.Js, Javascript, CSS

Research Interest

- Conversational agent
- Recommendation System
- Text Mining
- Reinforcement Learning
- Mental Health
- Mobile Sensing
- Personal Health care Informatics
- Mathematics Modeling and Simulating

Honors & Awards

2019	**Distinguished Graduate Student Award**, University of Virginia
2018	**NSF Travel Awards**, IEEE - EMBS
2017	**Distinguished Fellowship**, one of the most prestigious fellowships offered to engineering students at the University of Virginia.
2016	**Presidential Fellowship**, this fellowship was funded in part by the Ed and Linda Whitacre Graduate Fellowship Endowment in Texas Tech University
2015	**Scholarship Recipient**, to attend CRA-W (Computing Research Association) Grad Cohort Workshop.
2015	**Presidential Fellowship**, this fellowship was funded in part by the Ed and Linda Whitacre Graduate Fellowship Endowment in Texas Tech University
2013	**2nd Place**, among Computer Science - Artificial Intelligent M.S. students, Amirkabir University of Technology.
2011	**Distinguished BSc student award** , with honorary acceptance for the MSc program
2010	**1st Place**, among Computer Science and Mathematic B.S. students, Amirkabir University of Technology.
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Service

2019	**REU mentor**, Creating personalized-content for anxious people in the study, University of Virginia
2018-2019	**Academic and Industry Chair**, Link Lab Student Committee on Culture and Livability , University of Virginia
2018-2019	**Grad SWE board**, webmaster of Women Engineers organization, University of Virginia
2018	**REU mentor**, Detecting mental health from social media data, University of Virginia
2018	**NSBE UVA recruiter**, recruiting prospective students at the 2018 National Society of Black Engineers (NSBE) National Convention, Pittsburgh, Pennsylvania
2018	**SWE UVA recruiter**, recruit at the 2018 SWE National Convention, Minneapolis, Minnesota
2016	**REU**, Declarative Approaches to Knowledge Intensive Applications, Texas Tech Department of Computer Science