

ABOLFAZL FARAHANI

PERSONAL DATA

ADDRESS: 415 Boyd Graduate Studies Research Center
Department of Computer Science, University of Georgia
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GITHUB: www.github.com/abfarahani

EDUCATION

2016 - Present UNIVERSITY OF GEORGIA, USA
Ph.D. Candidate in COMPUTER SCIENCE
Advisor: Prof. Hamid R. ARABNIA

1997 - 2001 AZAD UNIVERSITY, IRAN
B.Sc. in COMPUTER ENGINEERING
Advisor: Prof. Ali CHITSAZ

RESEARCH EXPERIENCE

JUN 2021 - PRESENT Graduate Research Assistant
Athens, GA *Terry College of Business, University of Georgia*
Developing a model to identify group emotions in images and interpret their effects on donation behavior in online Crowdsourcing platforms.

AUG 2016 - PRESENT Graduate Research Assistant
Athens, GA *Dep. Computer Science, University of Georgia*
Implemented multiple Anomaly Detection models using autoencoder, various distance metrics such as Maximum mean discrepancy (MMD), KL divergence and Mahalanobis distance, and Support Vector Data Description (SVDD) loss to better extract a descriptive and compact representation of input image data.

DEC 2019 - AUG 2020 Machine Learning Scientist
San Francisco, CA *Smile Standard-StEP startup*
Incorporated mask region based convolutional neural network for deep instance segmentation of teeth in X ray images to help dentists make more precise teeth disorder diagnoses.

JUL 2019 - JAN 2020 Research Scientist
Davis, CA *Dept. Physiology and Membrane Biology, UC Davis*
Departments of Physiology and Membrane Biology
Conducted a research study to deliver a data classification pipeline using ANN to prescribe the most impactful attributes on the model prediction accuracy. We also utilized AzureML model interpretability toolbox to interpret the effects of parameters on the probability of a predictive score.

TEACHING EXPERIENCE

AUG 2019 - MAY 2021 Head Teaching Assistant
Athens, GA *University of Georgia*

- Software Development

MAY 2019 - AUG 2019 Lab Instructor
Athens, GA *University of Georgia*

- Introduction to Computing and Programming.

AUG 2016 - AUG 2019 Graduate Teaching Assistant
Athens, GA *University of Georgia*

- Computer Networks
- Computing, Ethics, and Society
- Human Computer Interaction
- Discrete Mathematics

PROFESSIONAL EXPERIENCE

- NOV 2012 - JUN 2013 Automation Engineer Consultant
Isfahan, Iran *Poweron Control Co.*
Designing and programming a control system and Implementing a database for a petrochemical company.
- AUG 2008 - Nov 2012 Lead Automation and Control System Engineer
Tehran, Iran *AMS Co.*
Designing and programming several automation control systems along with a database management platform for multiple oil and gas companies.
- SEP 2004 - AUG 2008 Automation Engineer and programmer
Isfahan, Iran *IRISA Co.*
Implementing several management/automation systems for steel, oil, and gas companies.
- MAY 2003 - SEP 2004 Software Engineer and web developer
Arak, Iran *Tabeshgar Electronic Co.*
Designing and developing a web portal for a telecommunication organization to provide an interactive dashboard.

PUBLICATIONS

- [1] **Farahani, A.**, AGHASAFARI, P., MILLER, A., YANZHI, H., AND SAMADIAN, A. DeepTeeNet: Tooth instance segmentation in radiographic images. In progress.
- [2] **Farahani, A.**, ASSEFI, M., , TAHA, T. R., RASHEED, K., ARABNIA, H. R., AND HERSONSKY, S. Document classification: Principles, techniques, and tools. In progress.
- [3] **Farahani, A.**, POURSHOJAE, B., RASHEED, K., AND ARABNIA, H. R. A concise review of transfer learning. In *2020 International Conference on Computational Science and Computational Intelligence (CSCI) (2020)*, IEEE, pp. 344–351.
- [4] **Farahani, A.**, VOGHOEI, S., RASHEED, K., AND ARABNIA, H. R. A brief review of domain adaptation. In *Transactions on Computational Science and Computational Intelligence (2020)*, Springer, pp. 869–886.
- [5] AGHASAFARI, P., **Farahani, A.**, YANG, P.-C., KERNIK, D. C., AND CLANCY, C. Classification of pathogenic and benign induced pluripotent stem cell-derived cardiomyocytes. In progress.
- [6] AMIRIAN, S., **Farahani, A.**, ARABNIA, H. R., RASHEED, K., AND TAHA, T. R. The use of video captioning for fostering physical activity. In *2020 International Conference on Computational Science and Computational Intelligence (CSCI) (2020)*, IEEE, pp. 611–614.
- [7] TOUTIAEE, M., KESHAVARZI, A., **Farahani, A.**, AND MILLER, J. A. Video contents understanding using deep neural networks. *arXiv preprint arXiv:2004.13959 (2020)*.
- [8] VOGHOEI, S., TONEKABONI, N. H., YAZDANSEPAS, D., SOLEYMANI, S., **Farahani, A.**, AND ARABNIA, H. R. Personalized feedback emails: A case study on online introductory computer science courses. In *Proceedings of the 2020 ACM Southeast Conference (2020)*, pp. 18–25.

INVITED TALKS

- NOV 2019 PANELIST,
Athens, GA “FACIAL RECOGNITION SOFTWARE”, DATA FOR GOOD
Terry College of Business, University of Georgia
- FEB 2019 INVITED SPEAKER,
Athens, GA “PYTHON AND DATA SCIENCE”, DATA SCIENCE
Computer Science Department, University of Georgia
- NOV 2018 INVITED SPEAKER,
Athens, GA “SPATIOTEMPORAL TOPIC MODELING FOR IMAGE CLASSIFICATION”, COMPUTER VISION
Computer Science Department, University of Georgia

POSTER PRESENTATIONS

- MAR 2019 VIDEO CONTENTS UNDERSTANDING USING DEEP NEURAL NETWORKS
Athens, GA Research day, Department of computer science, University of Georgia

SKILLS

PROGRAMMING Python, JAVA, C, C++, SQL, HDML, PHP, Matlab, R

FRAMEWORKS AND TOOLS pytorch, Tensorflow, Keras, OpenCV, Pandas, NumPy, Scikit-learn, AWS, GCP, Azure ML, Docker, Spark

EXPERTISE Machine learning, Deep learning, Data mining and visualization
Data and Quantitative Analysis, Big data queries and interpretation
Domain Adaptation, Transfer Learning, Representation Learning
Supervised/Unsupervised Learning, Anomaly Detection, Generative Models

CERTIFICATIONS

MAR 2021 MACHIN LEARNING
Online Triplebyte.com

DEC 2012 JAVA ADVANCED
Tehran, Iran AMS Co.

MAY 2012 JAVA FUNDAMENTAL
Tehran, Iran AMS Co.

FEB 2008 SQL SERVER
Isfahan, Iran IRISA Co.

HONORS AND AWARDS

SEP 2018 SECOND PRIZE WINNER
Atlanta, GA Home Depot Code_Athlon

MAY 2001 SECOND PRIZE WINNER
Tehran, IRAN National Intelligent mice Robotic Contest

JUN 1998 OUTSTANDING STUDENT AWARD
Arak, IRAN Computer Engineering department, IAU