MASOUD BASHIRI

Los Angeles, California

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Skills

Programming	Java, Groovy, Python, R, C/C++, Shell Scripting
Web	Javascript, Reactjs, Nextjs, React Native, Flask, Django, Node.js, Expressjs, Angular, HTML5, CSS/SASS
Data Science	Python, Pandas, Hadoop, Docker, Tableau, Keras, sklearn, Tensorflow, Lightgbm, Xgboost
Database	MySQL, PostgresSQL, Hbase, MongoDB, Redis
Technologies & Frameworks	Docker Swarm, Kubernetes, Grails, Robot Operating System, Spring, Hadoop, Hibernate, Maven, Git
Applications	PTV VISSIM, PTV Vistro, NetLogo, Matlab, Rviz, Gazebo
Theory	Machine Learning, Control Theory, Algorithm Design, Deep Learning, Reinforcement Learning
Neural Networks	Multi-layer Perceptron, Convolutional Neural Networks, Recurrent Neural Networks, LSTMs

Work Experience

UCLA Health *Los Angeles, CA*

SOFTWARE ENGINEER *July 2021 - Current*

- Responsible for rapid design, architect, prototype, and implement solutions to computer vision systems medical imaging software application and data service systems.
- Architect and developed highly scalable UI/UX application and processing pipeline in cloud computing environment.
- Designed and developed an ocr system for automated burnt-in phi deidentification lung CT images.
- Leveraged digital image processing techniques in design and development of a novel phi deidentification module for ultrasounds and mammograms.
- Monitor performance of processing workflow pipeline and outputs and take corrective action to optimize and improve the performance when necessary.
- Collaborate on agile practices, perform code reviews and mentored other developers on software engineering best practices.
- Collaborated with team on DevOps engineering and processes including infrastructure planning and implementation

Xnovative LLC *Los Angeles, CA*

CHIEF TECHNOLOGY OFFICER *July 2023 - Current*

- Managed a team of professionals to rapidly prototype, design and implement the company's first product, UniversityCube.
- Tech Lead and principal software engineer.
- Lead the design, development and CICD pipelines for UniversityCube.net

InVita Healthcare Technologies *Baltimore, MD*

SOFTWARE ENGINEER II & RESEARCHER *August 2020 - July 2021*

- Increased security implementing a Multi-factor authentication system (text and mobile app) on top of the CAS project.
- Improved product profitability and minimized product outage risk by developing an analytics app to supply chain managers. The app called invita360 provides insights and recommendations for managers to maximize revenue by moving products and utilizing warranty.
- Leveraged knowledge in Full stack web development, JavaScript, html, css, git and debugged using chrome developer tools.
- Optimized rfid event queue dispatcher to reduce queue clogging rate by 50%.
- Decreased disk and memory usage of a database collection app by 20% and 15%, optimizing the code involving quartz jobs running rsync commands through ssh.

University of Virginia *Charlottesville, VA*

Researcher (Machine Learning, Data Science) *August 2014 - August 2020*

- Researched machine learning solutions for Intelligent Transportation Systems
- Designed a microscopic traffic simulator in Matlab
- Built several models of an intersection controller with Multiple Regression models using Deep Neural Networks
- Assembled and tested several F1/10 autonomous vehicles
- Designed and Developed a Web Application for Baxter Robot

Yooz.ir Search Engine *Tehran, Iran*

Full Stack Software Engineer *March 2012 - August 2014*

- Developed a search engine evaluation system utilizing the JSF framework
- Managed a 5-member team focusing on design and implementation of evaluation and tagging system
- Hired 15 non-experts as test users and supervised users through a web interface designed to log all activities of taggers
- Increased search precision by 10% with an evaluation system that compared Yooz results with Google's and Bing's
- Improved search speed by 15% implementing a Hadoop-RPC API to serve offline rankings
- Conducted test cases, eventually helped increase query results accuracy and precision by 10%

Payam Nour University of Pardis *Tehran, Iran*

Lecturer *January 2012 - July 2012*

- Lectured Computer Architecture, Theory of Formal Languages and Automata

Payam Nour University of Zanjan *Zanjan, Iran*

Lecturer *February 2011 - September 2011*

- Lectured Computer Architecture and Fundamentals of Computer Systems

Iran Power Research Center *Tehran, Iran*

Software Developer and Researcher *October 2008 - February 2009*

- Developed a user interface in C#.net to monitor lamp posts

Education

University of Virginia *Charlottesville, VA*

Ph.D. In Systems Engineering *December 2020*

- Coursework: Data Mining, Control Systems, Optimization, Agent Based Modeling, Cognitive Engineering, Cyber Security

Amirkabir University of Technology *Tehran, Iran*

Master of Science in Computer Science *June 2011*

- Coursework: Artificial Neural Networks, Advanced Machine Learning, Robotics, Evolutionary Algorithms, Wireless Networks, Computer Vision, Image Processing

University of Isfahan *Isfahan, Iran*

Bachelor of Science in Computer Engineering *September 2008*

- Coursework: Programming, Advanced Programming, Data Structure, Database Design, Algorithms, VLSI, Microprocessors

Academic Experience

The Practice of Data Science *University of Virginia*

Teaching Assistant & Co-lecturer *August 2019 - December 2019*

- Supervised student Projects
- Graded weekly assignments and final project

Autonomous Mobile Robots *University of Virginia*

Teaching Assistant & Co-lecturer *Fall 2016, Fall 2017, Fall 2018*

- Built robotic algorithms and starter codes on the Turtlebot and the Crazieflie platforms
- Instructed Lab sessions

Data Science Sessions *University of Virginia*

Teaching Assistant *Spring 2016, Spring 2017*

- Defined student projects on various topics in Data Science
- Instructed TA Sessions

Data and Information Engineering *University of Virginia*

Teaching Assistant *Spring 2015*

- Supervised student projects on various topics in Data Science
- Conducted TA Sessions
- Graded weekly assignments and final project

Selected Publication

Data-Driven Intersection Management Solutions for Mixed Traffic of Human-Driven and Connected and Automated Vehicles
PhD Dissertation, University of Virginia, School of Engineering and Applied Science
Masoud Bashiri *2020*

Paim: Platoon-based autonomous intersection management
21st International Conference on Intelligent Transportation Systems (ITSC)
Masoud Bashiri, Hassan Jafarzadeh and Cody H. Fleming *2018*

A platoon-based intersection management system for autonomous vehicles
Intelligent Vehicles Symposium (IV)
Masoud Bashiri and Cody H. Fleming *2017*

Abstractions for design-by-humans of heterogeneous behaviors
Dance Notations and Robot Motion (pp. 237-262)
LaViers, A., Bai, L., Bashiri, M., Heddy, G., & Sheng, Y. *2016*

Two Phased Cellular PSO: A New Collaborative Cellular Algorithm for Optimization in Dynamic Environments
2012 IEEE Congress on Evolutionary Computation
Ali Sharifi, Vahid Noroozi, Masoud Bashiri, Ali B Hashemi, Mohammad Reza Meybodi *2012*

Hybrid adaptive differential evolution for mobile robot localization
Intelligent Service Robotics
Masoud Bashiri, Hedayat Vatankhah, and Saeed Shiry Ghidary *5, no. 2 (2012): 99-107*