Mohammad Azimi

Address & Phone Number by Request

Contact: mohammad@mazimi.com, www.mazimi.com

EDUCATION

University of California Berkeley / UCSF – PhD in Bioengineering 2008 – 2013

Emphasis in computational biology

Graduate Researcher in the Molecular Cell Biomechanics Laboratory:

Methods, software and algorithms development for the modeling of biochemical pathways using agent based models focusing on application to nucleocytoplasmic transport (Python, FORTRAN and R).

Graduate Researcher in the Berkeley Phylogenomics Group:

Developed software for improved fine-branching order of phylogenetic gene trees using a combination of protein and nucleotide sequence information (Python, R. https://github.com/mazimi/HYPNO)

Arizona State University – BSE Bioengineering – Business Minor 2003 – 2008

WORK EXPERIENCE

Evidera (previously Archimedes, Inc. – Acquired December 2013) – Data Scientist 2013 – Present

Design and implementation of a web-API with distributed back-end for a SaaS product that provides systematic analysis of observational data for pharmacovigilance (Python, RabbitMQ, Amazon EC2, Amazon Redshift/PostgreSQL, Amazon S3).

Served as the principal investigator on consulting projects for major pharma and biotech companies, managing teams of research associates and software developers. These consulting projects required in-depth literature review, development of mathematical models for cost-effectiveness analysis, and health outcome assessment for client solutions ranging from new pharmaceutical products to novel diagnostic tests using next generation sequencing (R, Python, PostgreSQL).

Rapid prototype development of analytics and modeling dashboards to support sales of consulting projects (JavaScript, Node.js, R).

Development of a web-based platform that enables users to build and evaluate predictive models of disease risks, from an aggregate of multiple data sources for use by the AHRQ's Evidence-based Practice Centers (Java, R).

Independent Consultant 2007 – Present

Genentech (2013 – 2014)
Tool design and development for PK/PD modeling (MATLAB).

Silver Creek Pharmaceuticals (2012 – 2013)
Software development for modeling of disease pathways to accelerate drug design and selection (MATLAB).

Medtronic Corporation (2007-2008)
Software development for wireless telemetry system intended for use with a range of medical devices (C#).

MedApps, Inc. (acquired by Alere) – Research & Development – Software Engineer 2008

Developed embedded software to enable functionality of wireless modules (cellular and Bluetooth) to communicate with medical devices and wirelessly transmit and store patient readings to a database (C, C# and SQL).

Intel Corporation – America Sales & Marketing 2005 – 2008

Work directly with retail channels and customers on building the brand image as well as conducting numerous one-on-one and group trainings. Designed and implemented new tool to track merchandising inventories and consistently improved merchandising score in the Phoenix, Las Vegas and San Diego areas.

Intel Corporation – Assembly Technology Development – Intern, Mechanical Core Competency 2005 – 2007

Summer 2007 Design, setup and implementation of a metrology to evaluate the mechanical, thermal and electrical performance characteristics of LGA sockets.

Summer 2006 Design, setup and implementation of a Twyman-Green Interferometer for measuring three dimensional displacements in silicon and packaging. Designed Lab View Interfaces for various tools in the lab to improve usability and automation of tests.

Summer 2005 Design, setup and implementation of mechanical digital image correlation for material property testing on various materials including thin films in correlation with a mechanical load frame.

Medtronic Corporation – MMC Reliability Group – Intern, Physics of Failure Spring 2007

Developed a methodology for drop/shock risk assessment of Medtronic microelectronic products prior to full assembly into devices for evaluation of new products, materials and manufacturing steps.

TEACHING EXPERIENCE

Graduate Student Instructor, Department of Bioengineering, University of California Berkeley 2009 – present

BioE131/231 – Introduction to Computational Molecular and Cell Biology
BioE110 – Biomedical Physiology for Engineers
BioE115 – Cell Biology Laboratory for Engineers
BioE101 – Instrumentation in Biology and Medicine

Lab Assistant, Arizona State University Integrated Manufacturing and Engineering Lab 2004 – 2006

ECE100 – Introduction to Engineering
IEE463 – Computer-Aided Manufacturing and Control

PUBLICATIONS & PRESENTATIONS

Azimi M, **Bulat E**, Mofrad MRK, Weis K, An agent-based model for mRNA export through the nuclear pore Molecular Biology of the Cell (MBoC): Special Issue on Quantitative Biology. E14-06-1065. 2014

Azimi M, Mofrad MRK, 2013 The Nucleoporin-ImportinB Affinity Gradient is Optimized for Maximum Nucleocytoplasmic Transport. PLoS ONE 8(11): e81741. 2013

Azimi M, Jamali Y, Mofrad MRK, 2011 Accounting for Diffusion in Agent Based Models of Reaction-Diffusion Systems with Application to Cytoskeletal Diffusion. PLoS ONE 6(9): e25306. 2011

Jamali Y, **Azimi M**, Mofrad MRK, 2010 A Sub-Cellular Viscoelastic Model for Cell Population Mechanics. PLoS ONE 5(8): e12097. 2010

ISPOR, Poster: A Software Platform to Synthesize Evidence from Heterogeneous Data Sources 2014

ASME Summer Bioengineering Conference, PhD Student Paper Competition, 2nd Place Award 2010

SKILLS

Python, R, JavaScript, C++, Bash, SQL, MATLAB, C#, FORTRAN, Perl, VB.NET, Embedded C (8051), Web Design (HTML/CSS/Bootstrap), Node.js, Python Flask, RabbitMQ, Amazon Redshift, Amazon EC2, Amazon S3, RESTful API Development, Android/Java Development, LabView, Solid Works, Windows/Linux/Mac, MPI and SSI cluster setup and maintenance