

Syed Shabih Hasan, Ph.D.

hasanshabih@gmail.com



<https://linkedin.com/in/syedshabihhasan>



<https://scholar.google.com/citations?user=TQq5xnQAAAAJ>



<https://github.com/syedshabihhasan>

Results-driven data leader with a full stack product experience ranging from inception to release. Experienced in scaling data science and analytics operations from zero to one. Built, developed, and maintained high-performing data teams and platforms focused on creating revenue-backed value while solving human-centric problems. Highly experienced in fundamental research and end-to-end product development focused on the daily well-being of humans by employing machine learning-based environmental, physiological, and behavioral sensing.

Skillset

Data: Machine learning lifecycle - inception to productization, business intelligence, pipeline design, scalable architectures, cost-aware data system scaling, real-time local and cloud processing for human-centric IoT systems.

Product Management: Sprint planning and management, resource planning, multi-team coordination, and management.

Leadership: Mentorship, team scaling, budget planning, industry-academia collaboration, raising capital, company operational strategy creation, enterprise customer acquisition, buy vs. build analysis, and execution.

Notable Industry Moments

ML-Led Product Scaling (2020-2022): Provided key leadership for scaling Delos's enterprise mindfulness offering from <10 end users to over 10,000 enterprise users. Key features implemented under leadership were: machine-learning backed recommendation system, ad campaign optimization, and end-to-end data-driven automated workflow for decision making. Customer (leadership and end customer) feedback indicated that automated recommendation and personalized treatment were their favorite features.

Venture Capital (2018-present): Provided technical expertise and subject matter expertise during venture capital raising from 2018-2019. The total capital raised was between USD 50-75mm.

Vertical Establishment (2018-present): Created and executed enterprise-wide strategic plan to establish a dedicated technology vertical at Delos. Key part of hiring the Chief Technology Officer, initial team hiring, and eventually team expansion (full-time and contractual). Specifically, the team went from one to 15+ (spread across four countries) over four years.

Academia-Industry Collaboration: Led multiple collaborations between Delos and research institutions while at the Well Living Lab (UC Berkeley, University of Iowa, and the University of Minnesota). Proposed and led a workshop at CHI 2018 on living labs. Serving as TPC for AI-IoT Workshop at SenSys, reviewer for CHI, TEI, and DIS.

Notable Academic Moments

Editor's Award: At the American Auditory Society in 2019 for "enhanced understanding of the efficacy of hearing aids in the wild" ([Link](#)).

Best Student Paper: The 2013 IEEE International Symposium on Computer-Based Medical Systems ([Link](#)).

Professional Experience

Delos Living LLC - New York, NY

Vice President - Data (Head of Data Science and Analytics)

2021-

Managed by: Chief Technology Officer

- Data Science and Analytics
 - Leading the development of a new smart indoor wellness feature for a new product in stealth mode.
 - Leading the new analytics efforts at the International Well Building Institute (IWBI), a wholly owned subsidiary of Delos, to optimize the implementation of the new WELL Performance Ratings, and the

- existing WELL Health & Safety Ratings, and eventually WELL Certification v2. Building a team, hiring a data program manager and a data analyst, and now leading the search for a data scientist.
 - Led the team that developed a recommendation system for Delos's enterprise mindfulness application. Led product growth from <10 users (pre-alpha) to over 10,000 enterprise users.
 - Optimized existing ad/marketing architecture to an automated data-driven system. This led to a 250% increase in in-app conversions within three months.
 - Created an ML-based part-replacement model to determine the optimal time to send a replacement part to the residential wellness customer. Customers noted this as a "delightful" feature.
- Data Engineering
 - Leading the creation of a user tracking system compliant with Apple's App Privacy guidelines while not losing details obtained from third-party attribution and event tracking systems. This led to the removal of third-party attribution and tracking tools resulting in annual savings of approximately \$100,000 per year.
 - Rearchitected enterprise cloud architecture from VM-based implementations to fully elastic container and serverless workflows. Reduced monthly cloud spending by approximately 82% per year.
- Data Governance
 - Led the team to create features aligned with CCPA, GDPR, and other privacy laws. This provided full privacy control to customers.
- Data Security
 - Leading the upgrade of all data systems to be compliant with recommendations from NIST. Utilizing services by a leading cyber security firm.
- Product Management
 - Liason between Technology and Product within Delos.
 - Responsible for overall timelines across products, reporting directly to the CTO and COO.
- Leadership
 - Creating three and five-year data strategies for Delos (and IWBI).
 - Creating annual budgets for the Technology department with the CTO and setting departmental and individual OKRs.
 - Subject matter expert on data for both Delos and IWBI.
 - Acquired one Fortune 10 and one Fortune 100 enterprise customer.

Vice President - Applied Research

2019-2020

Managed by: Executive Vice President (Delos Labs)

- Utilized the research data pipeline to create an 18-month experiment to test the hypothesis of objective environmental data predicting certain subjective tasks from participants across three states with an interdisciplinary team consisting of a frontend software engineer, a building scientist, a sleep scientist, and a public health expert.
- Led the technology team to create a full front and back-end analysis system that automated ETL and evaluated different modeling techniques ranging from logistic regression, decision trees, and forests to deep learning. Best models performed approximately 12% better than the state-of-the-art publicly available model.
- Implemented a system to produce the best-performing models on a schedule to study their efficacy in a controlled manner and optimize it using domain knowledge from subject matter experts. The system utilized a combination of off-the-shelf modeling tools (scikit-learn, Tensorflow, etc.), workflow orchestration (Apache Airflow), frontend frameworks (Bootstrap+Django), AWS Lambda, etc.

Senior Director - Applied Research

2018-2019

Managed by: Executive Vice President (Delos Labs)

- Created the first internal data collection platform at Delos for collecting environmental, physiological, and behavioral data utilizing Mobile Ecological Momentary Assessment and continuous sensing from objective sources. Event-triggered ML pipelines utilizing scikit-learn on containers were constructed.
- The platform enabled the creation of an end-to-end testbed for testing the research hypothesis in situ.
- Pilot testing of the platform was done on internal staff. It resulted in reduced time-to-insight by over 95% from previous systems.

Well Living Lab - Rochester, MN (Primary Research Facility - Collaboration between Delos and Mayo Clinic)

Research Scientist

2017-2018

Managed by: Managing Director - Well Living Lab

- Utilized data mining techniques on indoor lighting, shading, and employee survey data to understand the relationship between indoor lighting and employee satisfaction in the office. Extensively used regression and ensemble-based techniques to extract relationships of interest. This led to a patent application ([Link](#)).
- Led the development of portable sensing platforms using off-the-shelf sensors. This included building new hardware and software for collecting, processing, and analyzing environmental and behavioral data locally as well as synchronization with the cloud. The portable platform's performance was validated against research-grade sensors and yielded favorable calibration curves. Reduced the cost of field deployment by a factor of 20.

Starkey Hearing Research Center - Berkeley, CA

Research Intern

2015

Managed by: Director of SHRC

- Worked on exploring, proving, and modeling the existence of identifiable head movement gestures that represent human intent for advancing hearing aid control.
- Proved the existence of head movement-based gestures that constitute intent in accelerometer data using non-parametric statistical methods.
- Built optimized tree-based ensembles for recognizing gestures in real-time for individuals with mean accuracy for approximately 90% against a mean baseline accuracy of 60%.
- Designed, implemented, and analyzed experiments from the beginning to the end.
- Implemented a complete data collection, processing, and analysis pipeline using C and MATLAB.
- Secondary Project: Global noise meter using Twitter
 - Created the first global noise map through a hashtag and geotag-based data collection from Twitter using Python for identifying locations with high noise exposure.

Accenture - New Delhi, India

Associate Software Engineer

2011

- Worked on SAP Advanced Business Application Programming.

Education

Doctor of Philosophy in Computer Science

2012-2017

University of Iowa, USA

Advisor: Prof. Octav Chipara

Dissertation: Mobile Ecological Momentary Assessment for Hearing Aid Evaluation

Bachelor of Technology (with Honours) - Computer Engineering

2007-2011

Aligarh Muslim University, India

Advisor: Prof. M. A. Qadeer

Dissertation: Internet Radio on Computers (iROC) and Internet Radio on Mobile (iROM)

References

Available on request