MBI Capstone Mentors Directory

The following is the listing of past primary mentors for MBI student capstone projects from the Classes of 2017 – 2020.

Adam Landman, MD, MS, MIS, MHS
Brigham and Women's Hospital
alandman@bwh.harvard.edu
https://www.brighamandwomens.org/about-bwh/leadership/adam-landman

Students Mentored

Tamim Alganam, 2018 “Retrospective Usage Data Analysis of Watee Application”

David Rubins, 2019 Effect of Default Order Set Settings on Telemetry Ordering

Heather Lyu, 2019 “Development and Implementation of a Web Based Dashboard App to Track Patients on a Non-Operative Small Bowel Obstruction Treatment Pathway”

Lin Shen, 2020 “Clinical decision support system, using expert consensus-derived logic and natural language processing, decreased sedation-type order errors for patients undergoing endoscopy”

Adam Wright, PhD
Brigham and Women’s Hospital
*moved to Vanderbilt

Students Mentored

Erik Doty, 2017 Pain: A Retrospective Look at Hospital Pain Levels and the Effect on Patient Outcomes

Wenyu Song, 2017 Comparison of three clinical phenotypes by using genetic variations in Partners Biobank dataset

Boyi Yang, 2019 Development of Deep Learning Algorithms to Categorize Free-text Notes Pertaining to Diabetes: Convolution Neural Networks Achieve Higher Accuracy Than Support Vector Machines

Nabil Aounallah, 2019 A Database of Patient and Physician Characteristics from the US National Ambulatory Medical Care Survey

Rumana Rashid, 2019 “t-SNE facilitates visualization of CDS alert-time-series data to inform more targeted anomaly detection development and relationships between alerts”

Andrew Beam, PhD
HSPH
andrew_beam@hms.harvard.edu
Students Mentored

**Salem Karani, 2020** “Fast Multi-Modal Regression of Affect Extracted from Facial Images and Audio

*Andrew Capraro, MD, BCH*

BCH  
[andrew.capraro@childrens.harvard.edu](mailto:andrew.capraro@childrens.harvard.edu)

[https://connects.catalyst.harvard.edu/Profiles/display/Person/60517](https://connects.catalyst.harvard.edu/Profiles/display/Person/60517)

Students Mentored

**Melissa Van Cain, 2019** The Impact of a Prescription Drug Monitoring Program on Pediatric Opioid Prescribing in the Emergency Department

*Artem Sokolov, PhD*

HMS  
[Artem_Sokolov@hms.harvard.edu](mailto:Artem_Sokolov@hms.harvard.edu)

[https://scholar.harvard.edu/artem-sokolov/home](https://scholar.harvard.edu/artem-sokolov/home)

Students Mentored

**Pradeep Mangalath, 2020** “CoRaS: Cox proportional hazards and random survival forest methods for identifying drug repurposing candidates to treat breast cancer"  

*Charles Berde, MD, PhD*

BCH  
[charles.berde@childrens.harvard.edu](mailto:charles.berde@childrens.harvard.edu)

[http://www.childrenshospital.org/research/labs/berde-lab](http://www.childrenshospital.org/research/labs/berde-lab)

Students Mentored

**Gloria Carolina Donado Rincon, 2019** Developing a Pediatric Chronic Pain Data Repository

*Chirag Patel, PhD*

DBMI  
[Chirag_Patel@hms.harvard.edu](mailto:Chirag_Patel@hms.harvard.edu)

[https://www.chiragjpgroup.org/](https://www.chiragjpgroup.org/)

Students Mentored

**Kajal Claypool, 2017** Large Scale Meta-Analysis of Changes in Gene Expression Associated with Physical Activity Implicates CREB RF
Chen Dong, 2019 The Associations of NO2 and PM10 on Lung Functions, Physiological Measurements, and Hematological Parameters

Jiaqi Xie, 2019 Association of Cardiac-Wide Complications to Repeated Fasting Glucose Measurements

Usman Tahir, 2020 “The Assessment of N-Terminal Pro-BNP as a Biomarker of Risk for Cardiovascular Disease: Insights from the Jackson Heart Study and Malmo Diet and Cancer Study”

David Bates, MD
BWH
dbates@bwh.harvard.edu
https://connects.catalyst.harvard.edu/Profiles/display/Person/449

Students Mentored

Harvey Chin, 2020 “A Machine Learning Model for Predicting Medication Error and Ensuring Medication Accountability using EHR Data”

Eliezer Van Allen, MD
DFCI
eliezerm_vanallen@dfci.harvard.edu
https://vanallenlab.dana-farber.org/

Students Mentored

Nisarg Patel, 2019 Genomic Correlates of Response to Immune Checkpoint Blockade in Head and Neck Squamous Cell Carcinoma

Anran Tang, 2020 "Discovery of nocoding cancer driver mutations based on functional conservaation"

Emad Eskandar, MD,
MGH
eeskandar@partners.org
https://www.hms.harvard.edu/dms/neuroscience/fac/Eskandar.php

Students Mentored

Shaun Patel, 2018 “Identifying a Closed-Loop Neurophysiological Signal of Impulsive Decision-Making”

Fabienne Bourgeois, MD, MPH,
BCH
fabienne.bourgeois@childrens.harvard.edu
http://www.childrenshospital.org/directory/physicians/b/fabienne-bourgeois

Students Mentored

Chase Parsons, 2018 “Use of a Confidential Note Type in a Pediatric Hospital”

Finale Doshi-Velez, PhD
SEAS
finale@seas.harvard.edu
https://finale.seas.harvard.edu/

Students Mentored

Ming Yu Lu, 2019 Sensivity Analysis of Deep Reinforcement Learning among Septic Treatment

Henning Tiemeier, PhD
HSPH
tiemeier@hsph.harvard.edu
https://www.hsph.harvard.edu/henning-tiemeier/

Students Mentored

Ivan Sanchez Fernandez, 2019 Feature selection and prediction of attention deficit hyperactivity disorder with structural and functional magnetic resonance imaging

Ionita Ghiran, MD
BIDMC
ighiran@bidmc.harvard.edu
https://connects.catalyst.harvard.edu/Profiles/display/Person/27055

Students Mentored

Ben Illigens, 2018 “Accelerated large-scale quantification of red blood cell flickering motion”

Isaac Kohane, MD, PhD
DBMI
Isaac_Kohane@hms.harvard.edu
http://zaklab.org/courses.htm
Students Mentored

Dianbo Liu, 2020 “Multi-step construction of scalable risk calculators for prediction of severe mental illness and critical clinical outcomes using medical claims and EHR”

Maria Nakhoul, 2020 “Understanding the Underlying Mechanisms and Benchmarking for Drug Repurposing”

Jayashree Kalpathy-Cramer, PhD
MGH
kalpathy@nmr.mgh.harvard.edu
https://www.nmr.mgh.harvard.edu/user/8165

Students Mentored

Szu Yeu Hu, 2018 “Optic discs segmentation using convolution neural network”

Cheng Che Tsai, 2020 “Radiomics on Double-baseline Brain MRI of Glioblastoma Multiforme: feature repeatability assessment improves overall and progression-free survival prediction”

Jean Zhao, PhD
DFCI
Jean_Zhao@dfci.harvard.edu
https://zhaolab.dana-farber.org/?_ga=2.7559666.1911084779.1580332765-1092579429.1580332765

Students Mentored

Sheng Zhong, 2020 “Identification of Clusters, Driver Fusion Genes/Proteins of Breast Cancer Brain Metastases (BCBMs) and Related Signaling Pathway, Biological Process Analysis”

Jesse Boehm, PhD
Broad Institute
boehm@broadinstitute.org
http://www.boehmlab.org/

Students Mentored

Niklas Rindtorff, 2019 Living biosensors: predicting dependencies from living tumor samples by single-cell, label-free imaging

John Brown Miller, MD
Students Mentored

Ashley Kras, 2019 “Transfer learning accurately classifies retinal images from the UK Biobank”

John Brownstein, PhD
BCH
john.brownstein@childrens.harvard.edu
http://www.childrenshospital.org/research/researchers/b/john-brownstein

Students Mentored

Edwin Reyes, 2018 “Identifying Textual Patterns in Clinical Trial Patient Recruitment”

Michael Sauthier, 2020 “ePaO2 : A Continuous and Noninvasive Method to Estimate PaO2 in Pediatric Critical Care”

Jonathan Hron, MD
BCH
jonathan.hron@childrens.harvard.edu
http://www.childrenshospital.org/directory/physicians/h/jonathan-hron

Students Mentored

Colby Uptegraft, 2020 “Digitizing U.S. Air Force Medical Standards for the Creation of a Readiness Decision Support System”

JP Onnela, PhD
HSPH
onnela@hsph.harvard.edu
https://www.hsph.harvard.edu/onnela-lab/

Students Mentored

John Torous, 2018 "Using Patients’ Personal Smartphones to Inform Risk of Relapse in Schizophrenia: An Exploratory Pilot Study"

Kenneth Mandl, MD, MPH
BCH
kenneth.mandl@childrens.harvard.edu
http://www.childrenshospital.org/research/researchers/m/kenneth-mandl

Students Mentored

Jonathan Levin, 2020 “Identifying Phenotypes and Outcomes in Children Born Preterm using large claims data”

Kun-Hsing Yu, MD, PhD
DBMI
Kun-Hsing_Yu@hms.harvard.edu
https://khyulab.github.io/

Students Mentored

Eliana Marostica, 2020 "Unraveling Renal Cell Carcinoma Subtypes and Prognoses by Integrative Histopathology-Genomics Analysis"

Li Zhou, MD, PhD
BWH
lzhou@bwh.harvard.edu
http://mterms.bwh.harvard.edu/our-team/

Students Mentored

Sunny Mahesh, 2020 “Natural Language Processing to Improve Feature Selection and Temporal Relationship Identification for Pharmacoepidemiology Studies”

Maha Farhat, MD, PhD
DBMI
Maha_Farhat@hms.harvard.edu
https://scholar.harvard.edu/mahafarhat

Students Mentored

Avika Dixit, 2018 “Genotypic clustering does not imply recent tuberculosis transmission in a high prevalence setting: A genomic epidemiology study in Lima, Peru”

Chang Ho Yoon, 2020 “A convolutional deep neural network to predict antimicrobial resistance in Mycobacterium tuberculosis: increasing interpretability through genomic saliency maps”
Jessica El Halabi, 2020 “Clostridioides difficile Disease among privately insured patients in the United States.”

Ruojun Wang, 2020 “Alteration of skin microbiome in patients with acne and rosacea”

Marvin Harper, MD
BCH
Marvin.Harper@childrens.harvard.edu
http://www.childrenshospital.org/directory/physicians/h/marvin-harper

Students Mentored

Joshua Herigon, 2020 “Using natural language processing to optimize case ascertainment of acute otitis media in a large, state-wide pediatric practice network”

Nils Gehlenborg, PhD
DBMI
nils@hms.harvard.edu
http://gehlenborglab.org/

Students Mentored

Undina Gisladottir, 2019 “Data-Driven Visualization of Personal Risks to Enable Shared Decision Making During Informed Consent of Surgical Patients”


Paul Avillach, MD, PhD
DBMI and BCH
Paul_Avillach@hms.harvard.edu
https://avillach-lab.hms.harvard.edu/

Students Mentored

Jumanah Alshenaifi, 2019 “Mapping the pleiotropy of autistic spectrum disorders in Simon Simplex Collection (SSC) through PheWAS”

Ramy Arnaout, MD, PhD
BIDMC
arnaout@alum.mit.edu
http://arnaoutlab.org/#top
Students Mentored

Harry Burke, 2019 Immune repertoire diversity with similarity

Roger Mark, MD, PhD
MIT
rgmark@mit.edu
https://lcp.mit.edu/People

Chih-Ying Deng, 2019 Multi-label Classification of MIMIC-CXR reports using traditional neural network and transfer learning

Shawn Murphy, MD, PhD
MGH, DBMI
murphy.shawn@mgh.harvard.edu
http://www.mghlcs.org/shawn-murphy

Eric Yamga, 2020 “Screen and Scope phenotyping: an hybrid approach to electronic health record phenotyping using unsupervised machine learning and knowledge expertise using Heart Failure as a case study”

William J Lane, MD, PhD
Brigham and Women's Hospital
wlane@partners.org
http://bwhpathology.partners.org/CV.aspx?pathologistName=WJL11

William Gordon, 2018 “A comparison of calculated Panel Reactive Antibody (cPRA) scores between a national population and a local platelet donor pool in patients undergoing hematopoietic stem-cell transplantation”

X. Shirley Liu, PhD
DFCI/HSPH
xsliu@jimmy.harvard.edu
http://www.dfhcc.harvard.edu/insider/member-detail/member/xiaole-shirley-liu-phd/

**Students Mentored**

**Peter Shen, 2019** Tumor immune microenvironment characterization with deep neural networks predicts cancer immunotherapy response