

MBI Capstone Mentors Directory

The following is the listing of past primary mentors for MBI student capstone projects from the Classes of 2017 – 2021.

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 Wateen 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

<http://beamlab.org/>

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

<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

<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

<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

<https://www.chiragjpgroup.org/>

Students Mentored

Kajal Claypool, 2017 Large Scale Meta-Analysis of Changes in Gene Expression Associated with Physical Activity Implicates CREBRF

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 noncoding cancer driver mutations based on functional conservation"

Xiaoou Wang, 2021 "Evaluating pathogenic germline mutations as determinants of response to cancer immunotherapy"

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

Heng Li, PhD

DBMI/DFCI

heng_li@hms.harvard.edu

<https://hlilab.github.io/>

Students Mentored

Jiazhen Rong, 2021 "Somatic Mutations Calling on Mitochondria from scATAC-Seq of Chronic Lymphoblastic Leukemia"

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"

Jared Hawkins, PhD, MMSc

BCH (CHIP)

Jared.Hawkins@childrens.harvard.edu

<https://scholar.harvard.edu/jaredhawkins/bio>

Students Mentored

Iris Braunstein, 2021 "Hypothesis Generation for Under-Applied Uses of At-Home Metabolite Monitoring Tool"

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"

Liu Luwei, 2021 "Deep Learning and Grad-CAM Based Approach for Detection of Intracranial Hemorrhage"

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

MEEI

john_miller@meei.harvard.edu

<https://www.masseyeandear.org/find-a-physician/m/miller-john>

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"

Dany Thorpe Huerta, 2021 "The relationship between COVID-19 pandemic mandates and discussions of health and risk and public sentiment in MA: A Twitter analysis"

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"

Parker Bannister, 2021 "Assessing the Prospective Utility of Flat FHIR as a Scalable Standard for Bulk Analysis of Patient-Reported Outcomes"

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"

Chenyue Lu, 2021 "Leveraging Convolutional Neural Networks Towards Glioblastoma Multiforme (GBM) Histopathology Annotations"

Leina Essakalli Houssaini, 2021 "Multi-modality Data Analyses for Serous Ovarian Cancer"

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"

Qi Zhang, 2021 "Using Natural Language Processing to Identify COVID-19 and Hydroxychloroquine Related Topics in Social Media"

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”

Yu Zhang, 2021 "Mining gene expression profiles: transcriptomic signatures as M. tuberculosis drug resistance markers"

Marinka Zitnik, PhD

DBMI

marinka@hms.harvard.edu

<https://zitniklab.hms.harvard.edu/>

Students Mentored

Jingyi Liu, 2021 "Discovery of disease-drug off-label indication based on network representation learning"

Kathleen Sucipto, 2021 "Denoising Biological Networks with Graph Neural Networks"

Stone Chen, 2021 "Hyperbolic Representation Learning for Gene Ontology"

Yujie Shao, 2021 "Representation learning on heterogeneous graph for potential contraindications discovery"

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

Ziyi Hou, 2020 “Efficient Visual Summarization and Guided Exploration of Electronic Health Records”

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>

Students Mentored

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>

Students Mentored

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>

Students Mentored

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