Joshua Mandel <jmandel@alum.mit.edu>

10 Selkirk Road #3, Boston, MA 02135. 617-500-3253

Education

Tufts University School of Medicine 2006 – 2010, Boston, MA.

Doctor of Medicine. During surgery clerkship, built automated reporting software for medical students, liberating data from legacy EHR system. Courses include Anatomy, Physiology, Medicine, Surgery, Radiology, Pathology.

Massachusetts Institute of Technology 2001 – 2005, Cambridge, MA

Bachelor's Degree in Computer Science and Electrical Engineering. Cumulative GPA 4.9; In-major GPA 5.0. Courses include Artificial Intelligence, Algorithms, Microcontroller Project Laboratory, Computational Neuroscience, Quantitative Physiology, Genetics in Medicine, Biochemistry, Biotechnology and Engineering. Served as President and Treasurer of MIT French House.

The Hotchkiss School 1998 – 2001, Lakeville, CT

Rank: 1/166. Awarded prizes in English, French, History, Mathematics and Science. Performed in Shakespearean theater. Leader of campus Hillel. Taught computer skills to elderly.

Experience

Verily (Google Life Sciences) September 2016 – Present, Boston, MA

Health IT Ecosystem Lead. Defining clinical data strategy, tools, and standards that support healthcare delivery, disease management, and research. Significant focus on the Precision Medicine Research Program's *All of Us* Research Program, including APIs and repositories for raw and curated participant data in this NIH-funded longitudinal study aiming to recruit and track 1M volunteers across the country.

Harvard Medical School Department of Biomedical Informatics September 2016 – Present, Boston, MA

Visiting Scientist. Project lead for Sync for Science, a collaboration to help patients share EHR data with researchers. Partners include EHR vendors (Allscripts, athenahealth, Cerner, drchrono, eClinicalWorks, Epic, McKesson), and the US government (Office of the National Coordinator for Health IT, Office of Science and Technology Policy, and National Institutes of Health).

Boston Children's Hospital / Harvard Medical School June 2010 – Present, Boston, MA

Faculty, Boston Children's Hospital Computational Health Informatics Program
Instructor of Pediatrics, Harvard Medical School
Lead architect for SMART Health IT, intially funded by a 4-year, $15M award from the Office of the National Coordinator for Health IT. Led SMART's core development team to produce the SMART API for health data across electronic medical records, personal health records, and data-mining platforms. Published open reference software and end-user clinical applications. Led technology for the NIH-funded Sync for Science project, working with seven national Electronic Health Record vendors to support data sharing for research. Collaborated with hospitals, vendors, integrators, and app developers to promote adoption of open, standards-based health APIs. Core team member for the HL7 International FHIR standard (Fast Healthcare Interoperability Resources). Voting member of the National Health Information Technology Standards Committee and co-chair of the HITSC's API Task Force.

Codon Devices July 2005 – July 2006, Summer 2007 Cambridge, MA

Engineer. Collaborated to develop factory production environment for DNA synthesis of hundreds of genes per month. Co-designed laboratory information management system and automation platform using liquid-handling robots to support DNA production. Supported development of novel DNA synthesis protocols and automated analysis of DNA sequencing data.

George Church Laboratory, Harvard Medical School Summer 2004, Cambridge, MA

Undergraduate Researcher. Developed and tested techniques to process data from gene array experiments in mice. Used machine learning tools to classify large sets of data and identify interesting biological patterns.

MIT Library Access to Music Project 2001 – 2015, Cambridge, MA

Co-founder. Co-designed and implemented world's first on-demand campus cable TV music service, providing students with free access to licensed broadcasts of popular and classical music. Collaborated to build cable television broadcast system capable of controlling and serving 16 channels of audio and video to MIT community of 10,000. Featured in New York Times, USA Today, Associated Press, NPR.

LifeHarbor Investment Summer 2003, Cambridge, MA

Product Development Intern. As member of four-person team, built and tested new Fixed Income module for Portfolio Management software. Speeded software development by designing and teaching teammates to use new user-interface description language.

MIT Artificial Intelligence Laboratory Summer 2002, Cambridge, MA

Undergraduate Researcher. Wrote application that enables specification and manipulation of joint angles in 3D human figure drawings. Implemented published algorithm to detect and identify human skin in digital images.

Technical Skills

Strong experience building tools across the Web stack including RESTful API design, HTML5, JavaScript, OAuth.
Programming experience in diverse languages including JavaScript, Python, Java, C, C++, C#, MATLAB, Perl, Scheme.
Database design and management (relational: Postgres, MySQL, Oracle. nonrelational: MongoDB, openrdf-sesame)
Proficient with Linux, Mac OS, Windows

Additional Interests

Baking, collecting fountain pens, travel, reciting and writing poetry. Fluent in French.