MAX MELNIKAS

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Education

Harvard Chan School of Public Health, Boston, MA
M.S. in Biostatistics, GPA 3.9   expected 05/25
Relevant Awards: John E. Thayer Scholarship

Brandeis University, Waltham, MA
B.S. in Neuroscience and Biology with minors in Computer Science and Chemistry, GPA 3.8   received 05/23
Relevant Awards: Magna Cum Laude, Dean's List, Bauer Research Fellowship, Brandeis Presidential Scholarship, Guller Young Scholarship, Lithuanian Jewish Community Scholarship

Experience

Harvard Chan School of Public Health, Boston, MA   09/23 onwards
Research Assistant, Beiwe Service Center
- Provided study support to 10+ external research teams using Beiwe to capture digital health data streams (accelerometer, GPS, active surveys and audio recordings) using iOS and Android apps on participants' mobile devices
- Maintained the open-source, python-based Forest package that converts raw Beiwe data into individual and cohort-wide summaries for the four passive and active data streams mentioned above
- Conducted audits of Beiwe app performance and quantified impacts of app updates on data quality and longevity
- Demonstrated usage of the Forest package to research teams and worked to resolve any issues that arose
- Identifed new software bugs to the development team and shared resolutions to the research teams running studies

Skills: Software development, Client support   │ *Programs:* Python, Anaconda, Jupyter, GitHub, Git

Trinity Life Sciences, Waltham, MA   06/24 to 08/24
Summer Associate Consultant, Commercial Analytics
- Analyzed claims data of ~60k HCPs and identified 5,000 top promotional targets for a rare-oncology product launch
- Modeled several field team structures using a series of workload assumptions to generate a final sizing of 35 field reps
- Aligned the US into 35 territories rolled up into 5 regions, ensuring adequate workload and transportation access for reps
- Generated content and synthetic sales data for a demo of a pharmaceutical field team incentive compensation solution

Skills: Data analytics, Teamwork, Slide development   │ *Programs:* Excel, PowerPoint, Tableau, AlignMix, R, Aurochs

Brandeis University, Waltham, MA   08/20 to 12/22
Teaching Assistant, Brandeis Departments of Chemistry and Computer Science
- Designed a procedure for an online, simulation-based chemistry laboratory experiment during the pandemic, when chemistry lab was offered only remotely
- Led laboratory sessions and recitations for groups of 20+ chemistry laboratory students
- Provided one-on-one tutoring, coding support and feedback for programming assignments and problem sets of students in data structures and discrete mathematics

Skills: Laboratory safety, Mentorship, Presentation   │ *Programs:* Java, Excel

Marcus Institute, Hebrew SeniorLife, Roslindale, MA   06/22 to 08/22
Research Intern, Dr. Alvaro Pascual-Leone's Laboratory
- Proposed a standardized home-based tES protocol as part of a written review of previously published literature
- Assisted in T-test statistical analysis for a multi-site aging study that provided patients with personalized health insights
- Recruited participants and observed lab and home-based screenings for cognition and mobility

Skills: Literature review, Participant Recruitment, T-tests   │ *Programs:* Matlab, RedCap

Projects

ReAdmission Impossible: Predicting hospital readmissions to a cardiovascular clinic
- Accessed a Kaggle dataset of ~12k hospital visits to a cardiovascular clinic in India and identified readmitted patients
- Cross-validated and ensembled together Random Forest, XGBoost and Lasso regression classification models

Skills: Machine learning, Classification, Data wrangling.   │ *Programs:* R, GitHub, Git, LaTeX

Used Car Pricing: Modeling the effects of mileage, year, and body trim on car price
- Accessed the Auto.dev API for up-to-date online car listings and developed a dataset of ~1k Toyota Camrys
- Trained a linear regression and used it in an automated newsletter that highlights new car listings with high discounts

Skills: Linear regression, Outlier detection, Automation   │ *Programs:* Python, Jupyter, API