https://www.linkedin.com/in/drkrbn https://github.com/krbnite https://krbnite.github.io/

Addendum: Work and Professional Research Experience

Early Signal (Cohen Veterans Bioscience)

New York, NY • July 2018 - Present

Director of Data Science & Digital Health (July 2021 - Present)

Associate Director of Data Science & Digital Health (June 2019 - July 2021)

Senior Data Scientist (July 2018 - Jun 2019)

Research and development efforts at the intersection of sensors, deep learning, and brain health. This includes the design and testing of signal processing and machine learning pipelines on out-of-lab, "real world" sensor datasets, including devies such as wearables, mobile phones, and smart home tech, as well as in-lab medical devices. The devices collect raw sensor data from one or more sensors (e.g., accelerometer, gyroscope, magnetometer, PPG, heart rate, EDA/GSR, EEG, temperature). The overarching theme across multiple brain-health domains I work on (e.g., Parkinson's disease, Rett syndrome, PTSD, TBI, suicide) is to detect, classify, track, and/or predict semantically-meaningful features related to physical activity, sleep quality, symptoms, disease progression, and brain/mental health (e.g., human activity recognition, gesture recognition, symptom monitoring, clinical scale estimation/forecasting), and to do this in an objective, consistent, high-frequency manner. These projects often include more traditional measures and datasets as well, such as clinical scales, neurocognitive tests, health records, demographics, brain imaging, etc.

Other activities include project management, help with grant writing, mentoring, landscaping and literature reviews, poster presentations, and publishing (several papers in early stages of peer review process).

Sample of Externally-Facing Work

- Are wearables worth the hype? https://www.cohenveteransbioscience.org/2020/09/29/are-wearables-worth-the-hype-digital-biomarkers/
- Quantifying stereotypic hand movements in Rett Disorder. Society of Biological Psychiatry's 74th Annual Scientific Conference (Innovations in Clinical Neuroscience: Tools, Techniques and Transformative Frameworks). 2019.
- Quantifying stereotypic hand Movements in rare disorders using IMU sensors and deep learning algorithms. National Organization for Rare Disorders (NORD): Rare Diseases and Orphan Products Breakthrough Summit. 2019.
- Suicide report submitted to the White House in response to a Request for Information (RFI): Executive Order (EO) 13861 - President's Roadmap to Empower Veterans and End a National Tragedy of Suicide (PREVENTS)