Gabriel Figueiredo Miller

Nationality	**Born**	**Address**		**Contact**
USA	*05/04/1995*	*99 Paul Gossen Str.*		*+49-1781696303*
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EDUCATION

University of Erlangen-Nuremberg, *Erlangen, Germany*

M.Sc. in Signal Processing and Communications Engineering   **Expected Dec 2020**

New York University, *New York, NY*

B.A. in Mathematics   **Received May 2017**

PROFESSIONAL EXPERIENCE

Research Assistant, *Lab of Multimedia Communication and Signal Processing, Erlangen, Germany*   **Oct 2018 - *Ongoing***
- Collaborate with the department chair and a Ph.D. student adviser identifying different topics to explore.
- Research the field of acoustic source localization, in particular signal detection estimators for multi-channel systems subject to noise and reverberation.
- Developing a paper detailing a node movement detection algorithm based off Markov Random Fields and a manifold-based semi-supervised source localization method.

Roadshow Analyst, *Natixis Investment Managers, Boston, MA*   **Jan 2018 - Aug 2018**
- Utilized data on Roadshow activity to put together reports detailing results categorized as needed, such as by geographic region, affiliate speaker, or sales team.
- Leveraged data to build models giving insight into these specific categories, for example which investment manager would be most appropriate to speak to a given product in a specific region.
- Obtained invaluable experience in the synthesis and presentation of data by crafting reports for upper management.

Data Analyst, *Ai Media Group, New York, NY*   **May 2016 - Aug 2017**
- Worked with Search Engine Marketers to optimize campaigns, increase traffic, and drive sales.
- Used SQL and R to query data within Ai Media's server, and stream into Microsoft Power BI.
- Aggregated and presented findings to upper management and clients ensuring presentations were comprehensible and actionable.

RESEARCH EXPERIENCE

Acoustic Sensor Network Misalignment Recognition using a Semi-Supervised Localization Technique,   **May 2020**
Signal Processing Lab, Bar-Ilan University, Ramat Gan, Israel
- Awarded an Erasmus Grant to do research at Bar-Ilan University in Israel for three months during which a research report, and article (to be submitted in October 2020 for conference) were produced.
- Created an algorithm using MATLAB which produces a probabilistic assessment of whether an array in a given microphone network, like a smart-home environment, is potentially compromised based off Markov random fields.
- Demonstrated the probabilistic approach to be advantageous over naive estimates as it is consistent in its ability to identify disruption in a network and reports an intuitive indication of the magnitude of disruption.

Assessing the Dysarthria Level of Parkinson's Disease Patients with GMM-UBMs and SVMs,   **Dec 2019**
Pattern Recognition Lab, FAU Erlangen-Nuremberg
- Evaluated a set of speech specific bio-markers for Parkinson's disease (PD) to both identify PD patients and rate the severity of a given speaker's hypokinetic dysarthria.
- Developed bio-markers including phoneme class posteriors output from a bank of parallel, bidirectional RNNs, indicating the probability of a segment of a given patient's speech to be of a certain phoneme class.
- Results were competitive to what had been achieved in similar studies that used more complex features which can be difficult to interpret for the purpose of prognosis.
- Paper developed and submitted for the 2020 Text Speech and Dialogue International Conference.

TECHNICAL SKILLS

Programming:	MATLAB, Python, R, SQL
Tools:	Git, LaTeX, Pytorch, Tensorflow
Language skills:	English, Portuguese, German (A1.2)