**EXPERIENCE**

**Post-Doctoral Researcher, NYU Child Study Center 03/2020-Present**

* **Databases**: Design and manage data processes for research study, merging longitudinal survey and EMR data to examine changes to perinatal healthcare due to Covid-19 pandemic.
* **Dashboard:** Created data dashboard with key insights to quickly disseminate research findings on Covid-19 pandemic with scientific partners, clinicians, and the general public.
* **Operations:** Developed interactive web application to forecast key metrics (cost, volume) of research study operations over a 2-year period to drive decision-making in study design.

**PhD Student Researcher, Columbia University 09/2014-02/2020**

* **Statistical modeling:** Applied non-linear regression to model longitudinal changes in brain development, and presented findings at conferences and in first-authored manuscript.
* **Machine learning:** Contributed to collaborative codebase to identify reproducible dimensions (PCA) of childhood adversities, and applied ML models (random forest) to predict mental health outcomes. Results contributed to co-authored manuscript.
* **Classification:** Supervised master’s thesis project, which applied boosted tree models to classify participants (adversity vs. control) from brain imaging features.
* **Workflows:** Developed processing pipelines for 50 GB of neuroimaging data using high-performance computing, decreasing processing time by 10-fold for lab-wide projects.
* **Data management:** Developed storage and QA procedures for databases that combined diverse datatypes, including biomedical imaging (MRI), clinical measures and survey data.

**Teaching Experience, Columbia University 09/2014-12/2019**

* **Technical workshops:** Developed and delivered tutorials on R programming, version control, and reproducible workflows for psychology researchers.
* **Teaching Assistant:** Graduate and undergraduate level courses on data visualization and statistical analysis in R, and received strong evaluations for teaching effectiveness.
* **Project supervision:** Mentored 6 research assistants and thesis students on data analysis projects, all of whom have been admitted to top graduate or medical schools.

**EDUCATION**

**PhD in Psychology**, Columbia University May, 2020

**BA in Neuroscience**, Dartmouth College June, 2012

**SKILLS**

* **Computing:** R, R markdown, python, SQL, Git/github, HPC, unix, shell scripting
* **Statistics:** Linear models, multivariate statistics, time series, hypothesis testing, A/B testing
* **ML:** Regression, dimension reduction, feature engineering, classification, ensemble models
* **Portfolio**: <https://mvantieghem.github.io/> **Code:** <https://github.com/mvantieghem>