Ellen Martin

(475) 414-9126 | martin.ellenjane@gmail.com | **LinkedIn**: linkedin.com/in/martinellenjane | **GitHub**: github.com/ellenmartin11 | **Portfolio**: ellenmartin11.github.io/portfolio

PROFESSIONAL SUMMARY

- Current **MSc Data Science** Dean's Scholar (expected Dec 2026)
- **MRes Developmental Neuroscience** and Psychopathology Honors Graduate (July 2023)
- **BSc Psychology** First-Class Dean's List Graduate (July 2021)
- **5+ years of practical research experience** (machine learning, statistics, NLP, genomics, longitudinal analysis, biobehavioral data, self-report surveys)
- **6+ years of patient and client interaction** experience (clinical interviewing, recruitment)
- Proficient in R, Python, MATLAB, SQL and SPSS
- **4 original research articles published** in Q1 journals**, 2 research posters published** in conferences, reviewer experience
- Familiar with **cloud infrastructure**, **data engineering pipelines** and **dashboarding** tools.
- Experience working in **research laboratories**, **nonprofit organizations**, and working with a clinical consultant psychologist.
- Skilled in **designing and conducting experiments**, collecting data and recruiting study participants.

CORE COMPETENCIES:

Data Science & Machine Learning:	▪ **Language Models:** Word Embeddings, Text Analysis, OpenAI API Integration, Semantic Similarity, Dimensionality Reduction, Text Mining ▪ **Predictive Modeling and Machine Learning**: Statistical Inference, Causal Inference, Computational Model Implementation, Algorithm Adaptation ▪ **Big Data Analytics**: Exploratory Data Analysis, Longitudinal Analysis ▪ Healthcare Analytics ▪ Genomic Analysis ▪ Database Engineering
Programming & Tools:	▪ **Core Programming:** R, Python, MATLAB, SQL, SPSS ▪ **ML/AI Tools:** TensorFlow, NLP Libraries, OpenAI APIs, Sci-kit Learn, AI/ML Algorithms ▪ **Cloud Infrastructure:** AWS S3, EC2, Git, PySpark ▪ **Data Processing:** Big Data Analytics, Database Engineering, json, neo4j, MongoDB ▪ **Dashboarding:** Atlas (MongoDB), Flask
Research, Experimentation &Analysis:	▪ **Experiment Tools:** Gorilla Experiment Builder, REDCap, Qualtrics, Prolific ▪ **Experiment Design and Implementation:** Protocol Drafting, A/B Testing, Randomized Control Trials, Grant Proposals, fMRI Data Acquisition, Standardized Questionnaire Administration, Clinical Interviewing, Patient Health Data Protection, Human Research Ethics, Cross-Functional Collaboration, Laboratory Experience ▪ **Research Publication:** Manuscript Writing, Literature Reviews, Meta-Analysis, Conference Presentations Experiment Design and Implementation ▪ **Participant/Client Interaction:** Working with children and parents, families involved in justice systems, patients with clinical disorders, refugee and immigrant populations.

EDUCATION

Tagliatela College of Engineering, University of New Haven ▪ West Haven, CT   (expected Dec 2026)
*Master of Science in Data Science ▪ **Dean's Scholar** ▪ 3.9 GPA*

- **Coursework:**
  - ▪ Machine Learning ▪ Big Data ▪ Data Visualization ▪ Natural Language Processing (NLP) ▪ Leadership in Data & AI Products ▪ Data Ethics ▪ Data Engineering ▪ Algorithm Engineering
- **Tools:**
  - ▪ Python ▪ R ▪ SQL ▪ TensorFlow ▪ Tableau ▪ AWS ▪ Git ▪ PySpark ▪ Neo4j
- **Achievements:**
  - ▪ Dean's Scholarship

Anna Freud Centre, University College London ▪ London, United Kingdom   (September 2021 - July 2023)

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*Master of Research in Developmental Neuroscience and Psychopathology ▪ **Honors Graduate** ▪ **4.0 GPA***
- **Coursework:**
  Neuroimaging Techniques Data ▪ Advanced Multivariate Statistics ▪ Developmental & Clinical Psychology ▪ Dimension Reduction ▪ Path Modeling ▪ Research Publication ▪ Meta-Analysis ▪ Parent-Child Relationships ▪ Interpersonal Violence ▪ Substance Misuse
- **Tools:**
  - Python ▪ R
- **Achievements:**
  - Graduated with honors
  - Published thesis findings in the Journal of Interpersonal Violence (Q1)

University College London ▪ London, United Kingdom   (September 2018 - July 2021)
*Bachelor of Science in Psychology ▪ **First Class Degree, Dean's List Graduate** ▪ **4.0 GPA***
- **Coursework:**
  - Big Data ▪ Structural Equation Modeling ▪ Statistics ▪ Research Publication ▪ Causal Inference ▪ Behavioral Genetics ▪ Cognitive Neuroscience and Neurobiology ▪ Decision-Making ▪ Social Psychology ▪ Clinical Psychology ▪ Research Methods in Psychology ▪ Qualitative Research Methods
- **Tools:**
  - R ▪ FUMA ▪ SPSS ▪ Bash ▪ High-Performance Clusters ▪ Gorilla Experiment Builder
- **Achievements:**
  - Winner of the Undergraduate Project Prize
  - Published dissertation findings in Psychiatry Research (Q1)
  - Dean's List Graduate (Top 5% of Cohort)
  - Produced over 10 research reports throughout the program, earning an Upper First grade in the research methods module

PROFESSIONAL EXPERIENCE

Integrated Refugee and Immigrant Services ▪ New Haven, CT   June 2025 - Present
Volunteer Data Analyst and Employment Assistant
- **Big data analysis:** Consolidated, cleaned and normalized **5 years of structured and semi-structured data** from different sources for a final grant report, consisting of data from **over 200 clients**.
- **Reporting and insights:** Analyzed data using R and Excel to generate insights for department supervisors and presented to Connecticut state program donors.
- **Database and spreadsheet management:** Generated user-friendly spreadsheets and formal reports for organization-wide use.
- **Client work:** Assisted around 5 clients with seeking and obtaining employment by conducting employment assessments and generating tailored resumes. Enrolled 4 clients into higher-education certification programs.

Yale University ▪ New Haven, CT   June 2023 - December 2024
Postgraduate Computational Research Technician, Rutledge Lab
- **Computational modelling:** Implemented and developed economic decision-making models and computational models of mood on data collected for a five-year longitudinal **NIH-funded R01** study on happiness, decision-making and depression using Python, R and MATLAB.
- **Data collection:** Collected and analyzed **neuroimaging data** from over 12 participants, **smartphone** app from 100 participants, survey and conducting **SCID clinical interviews** with 5 participants.
- **Experiment design:** Led the development of a 12-month follow-up study arm, involving designing surveys based on literature, tasks to be delivered on a smartphone app, drafting study protocols and payment scheduling.
- **User experience and monitoring:** Monitored app performance weekly and liaised with teams of developers and engineers to optimize user experience and improve data quality.
- **Participant tracking databases:** Developed and maintained large participant databases to track participation, adherence and participant reimbursements over a 12-month period, improving protocols reimbursing participants on time, and improving participant completion rates of monthly follow-ups.
- **Protocol optimization:** Increased study enrollment 3x through protocol optimization, and doubled completion rates of a computerized follow-up.

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- **Data pipelines:** Developed pipelines for cleaning and preparing data collected on the online Gorilla platform for collaborator use.
- **Research presentation:** Presented research based on over 5,000 participants at the Computational Psychiatry Conference (2024).

Yale University Child Study Center ▪ New Haven, CT   August 2022 - June 2023
Research Assistant, Stover Lab

- **Clinical interviewing, survey administration and consent:** Conducted clinical interviews with and administered standardized surveys on participants in the Fathers for Change intervention for family violence, increasing enrollment by 5 participants.
- **Research publication and drafting:** Contributed to a published lab manuscript by conducting literature reviews and drafting description sections, and contributed to an **accepted grant proposal for an R21** (NIH).
- **Biobehavioral data pipelines:** Designed a Python and AWS S3 Bucket pipeline for obtaining and analyzing biobehavioral data collected using wearable technology for a new NIH-funded R21 clinical trial studying trauma.
- **Statistical inference:** Analyzed outcomes associated with the Fathers for Change intervention and examined participant adherence using R and SPSS.
- **Longitudinal path modeling:** Analyzed a dataset containing 30 years' worth of data from 200 participants to examine outcomes associated with prenatal cocaine exposure.
- **Research presentation:** Presented research findings at the Western Psychological Association 2023 Conference in Riverside, CA.

Crescendo ▪ London, United Kingdom   December 2019 - August 2022
Psychology Assistant

- **Intervention implementation:** Under the supervision of a Licensed Clinical Psychology Consultant, assisted with the implementation of a one-to-one literacy development program for children with neurodevelopmental challenges.
- **Working with children:** Worked with 5 different children and families, meeting biweekly for development sessions, using reinforcement learning principles to improve literacy skills.
- **Clinical supervision:** Regularly met with colleagues and my supervisor to discuss clinical observations and address problems with implementation.

PROJECTS AND PORTFOLIO

Language Conceptualizations of Depression ▪ New Haven, CT   August 2023 – December 2023
Postgraduate Research Technician, Yale University Rutledge Lab

- Exploratory independent research project comparing numeric scale ratings of depression to **language conceptualizations** of depression.
- Standardized and cleaned unstructured text data from participants for sentiment analysis.
- Generated **word embeddings from OpenAI** based on participants' short, open-ended response to standardized prompts.
- Implemented NLP techniques such as computing Euclidean and Cosine distance between embeddings, and implementing **dimensionality reduction** techniques.

Anxiety, Mood and Decision-Making ▪ New Haven, CT   February 2024 – December 2024
Postgraduate Research Technician, Yale University Rutledge Lab

- Research project for a poster presentation at the Computational Psychiatry Conference (2023, Minnesota).
- Cleaned and analyzed **5,000+ participants' worth of smartphone data** to examine the impact of depression and anxiety.
- Using MATLAB and R, adapted existing **computational models** of decision-making and happiness to fit a risky and uncertain **decision-making game**.

Genetic Underpinnings of Loneliness and Mental Health ▪ London, UK   August 2020 – July 2023
BSc Psychology Undergraduate, University College London Causal Mapping Lab

- Analyzed **genomic data** from **1,000,000+ individuals** using **Genomic Structural Equation Modelling** to examine latent associations connecting loneliness, mental health disorders and substance use.
- Conducted a Genome-Wide Association Study (GWAS) to examine genetic loci associated with loneliness.
- Implemented **Mendelian Randomization** to conduct **causal inference** analysis based on genetic data.
- Resulted in nomination for the undergraduate project prize, and was published in Psychiatry Research.

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PUBLICATIONS

- **Martin, E.,** Ramos, K. N. L., Modanesi, E., Mayes, L.C., & Stover, C. S. (2025). *Substance Use, Executive Function and Young Adult Intimate Partner Violence: Direct and Indirect Pathways.* Journal of Interpersonal Violence.
- **Martin, E.,** Schoeler, T., Pingault, J-B & Barkhuizen, W. (2023). *Understanding the relationship between loneliness, substance use traits and psychiatric disorders: A genetically informed approach.* Psychiatry Res.
- **Martin, E.,** Hur, J. K, Bedder, R. L., Heffner, J., Kao, C-H., Feng, G. W., & Rutledge, R. (2024). *Anxiety alters mood sensitivity to outcomes during risky decision-making.* Computational Psychiatry Conference.
- Stover, C. S., Holland, M. L., **Martin, E.,** Modanesi, E., Fish, M. C., & Beebe, R. *Comparing in person to telehealth delivery of a family violence intervention.* (2024). Clinical Psychology & Psychotherapy.
- Schoeler, T., Baldwin, J., **Martin, E.,** Barkhuizen, W., & Pingault, J-B. *Assessing rates and predictors of cannabis-associated psychotic symptoms across observational, experimental and medical research.* (2024). Nature Mental Health.

LANGUAGES

English	*Native-Speaker*	
Spanish	*C1 – University College London*	January 2012 – May 2019