

# Research Assistant – Digital Psychiatry & AI in Mental Health

PI: John Torous, MD

Division of Digital Psychiatry | Beth Israel Deaconess Medical Center | Harvard Medical School

Boston, MA (Full-Time, In-Person)

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## Position Overview

The Division of Digital Psychiatry at Beth Israel Deaconess Medical Center (Harvard Medical School) is seeking a full-time Research Assistant with a strong technical background to work at the intersection of artificial intelligence, smartphone data science, and clinical psychiatry.

This position combines work in:

- Evaluating generative AI models for mental health in partnership with the National Alliance on Mental Illness (NAMI)
- Developing and analyzing smartphone-based digital phenotyping tools
- Advancing data-driven digital interventions for depression, anxiety, and psychosis
- Supporting real-world digital clinical programs

This role is ideal for individuals planning to pursue medical school, MD/PhD programs, or graduate training (PhD/MS) in computational, clinical, or translational sciences who want rigorous research training, technical development, and direct patient exposure.

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## Core Responsibilities

The successful candidate will:

- Evaluate LLMs and generative AI systems for mental health safety, reliability, and benchmarking
- Work directly with patients and NAMI leadership to assess real-world AI performance
- Analyze smartphone-derived digital phenotyping data to predict symptom trajectories and relapse

- Contribute to development and deployment of digital mental health tools and mobile applications
- Assist with supervised clinical and neurocognitive assessments
- Support ongoing digital clinic initiatives for anxiety and depression
- Contribute to manuscripts, abstracts, and national conference presentations

The position offers significant opportunities for authorship, conference travel, and close mentorship.

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## **Required Background – Technical Foundation**

All applicants must have prior training in computer science, engineering, mathematics, or a related field. This role is not purely clinical or administrative and it requires comfort working with code, data, and digital systems

Minimum expectations include:

- Working knowledge of programming (Python preferred)
  - Comfort working with APIs and/or LLM interfaces
  - Understanding of basic statistics and data analysis
  - Familiarity with algorithms and data structures
  - Strong debugging and problem-solving skills
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## **Preferred Technical Experience**

Experience in one or more of the following areas is highly desirable:

### **AI / LLM Evaluation**

- Prompt engineering
- Benchmark design
- Model evaluation pipelines
- Experience working with multiple LLM platforms

### **Full Stack or Mobile Development**

- TypeScript/JavaScript
- Node.js
- Mobile app development (iOS/Android)

### **Cloud & DevOps**

- AWS (deployment, monitoring, scaling)
- Docker or containerization tools
- Infrastructure-as-code tools (e.g., Terraform)

## **Data Science**

- Handling longitudinal or sensor-derived data
- Experience with real-world datasets
- Interest in predictive modeling

Applicants do not need mastery in all areas, but must demonstrate serious technical fluency and readiness to learn quickly.

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## **Ideal Candidate Profile**

This position is particularly well-suited for:

- Computer science, engineering, math, or computational neuroscience majors
- Students pursuing medical school who want strong computational training
- Pre-MD/PhD candidates interested in translational digital psychiatry
- Students planning PhDs in AI, digital health, computational psychiatry, or related fields

You should be:

- Comfortable working in both technical and patient-facing settings
  - Interested in mental health and clinical applications of technology
  - Motivated to publish and present research
  - Able to thrive in a fast-paced translational research environment
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## **Commitment**

- Full-time (~40 hours/week)
  - In-person, five days per week at BIDMC in Boston
  - Minimum 1–2 year commitment preferred. Preference will be given for >1 year.
  - Start date: Late Spring or Early Summer
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## **What You Will Gain**

- Direct patient interaction and clinical exposure

- Deep technical experience with AI systems and digital health platforms
  - First-author publication opportunities
  - National conference presentations
  - Strong mentorship and track record of trainees matriculating into medical and PhD programs
  - Experience at the forefront of digital psychiatry and AI safety in mental health
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## About the Division

The Division of Digital Psychiatry advances mental health access through innovation in smartphone-based digital phenotyping, digital therapeutics, AI safety evaluation, and digital literacy initiatives.

Learn more:

- <https://www.digitalpsych.org>
- <https://docs.lamp.digital/>
- <https://mindbench.ai/>

## To Apply

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Send a CV and cover letter to [jtorous@bidmc.harvard.edu](mailto:jtorous@bidmc.harvard.edu) and [syran12@bidmc.harvard.edu](mailto:syran12@bidmc.harvard.edu)