Atta Gyasi Domson

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January 30, 2026

Selection Committee
NBER Innovation Research Boot Camp 2026
National Bureau of Economic Research
Cambridge, MA 02138

Dear Selection Committee,

I am a second-year PhD student in Economics at Emory University, and I am writing to apply for the 2026 NBER Innovation Research Boot Camp. I am completing two years of coursework in my PhD program, which I would have completed by May 2026, before the start of the Boot Camp. My advisor, Professor Jillian Grennan, will submit a letter of recommendation on my behalf.

My research examines how innovations shape economic decisions at the firm and household levels. I am particularly interested in the emergence of general-purpose technologies such as artificial intelligence. My current work examines how investment in AI for predictive analytics affects firms' traditional brand-building decisions.

Reviewing the speakers for the Boot Camp, I have been particularly influenced by Ina Ganguli's work on model selection, which demonstrates how different language models extract different economic signals. This perspective has shaped how I think about studying prompt engineering as an economic object, especially the interaction between model architecture, prompt design and firm-level innovation outcomes. I am also eager to learn from Pierre Azoulay on the "ideas sector," which I expect will help refine my research questions and deepen my understanding of innovation dynamics.

With my experience facilitating constructive academic discussions and organizing collaborative events, I am confident that I would contribute positively to the Boot Camp community. I look forward to engaging respectfully with fellow participants, learning from their perspectives, and contributing ideas to the broader conversation on innovation.

I would appreciate the opportunity to be selected for this Boot Camp, given my deep interest in the economics of innovation.

Sincerely,

Atta Gyasi Domson

ATTA DOMSON

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RESEARCH INTERESTS

Economics of Innovation · Artificial Intelligence · Firm Strategy & Market Dynamics · Applied Microeconomics

EDUCATION

Emory University | PhD in Economics | 2024 – Present

- Fields: Applied Microeconomics, Econometrics
- Courses: Microeconomics I and II, Macroeconomics I and II, Probability Theory and Statistical Inference, Econometrics I and II, Advanced Topics in Econometrics, Market Structures and Imperfect Competition, Health Economics II, Causal Inference: Panel Data
- PhD Advisor: Jillian Grennan

University of Ghana | BA in Economics and Mathematics | 2019 – 2023

- First Class Honours

RESEARCH

Brand Value Investment in the age of AI | Emory University | 2026 – Present

Working Paper in Progress

- When does AI serve as a complement or substitute to firm-level traditional brand capital? This question examines how firm-level investment in AI predictive models distorts traditional brand investment
- Develop a structural model to examine when AI functions as a complement or substitute for firm-level traditional brand capital investment.
- Provide the first theoretical framework explaining how predictive AI adoption distorts traditional brand-building decisions, generating testable empirical predictions.

Hyperbolic Geometry & Spatial Optimization | University of Ghana | 2024

- Co-designed a mathematical model applying hyperbolic geometry to spatial structure
- Presented at the African Renaissance Day Celebration

TEACHING

Teaching Assistant | Emory University & University of Ghana | 2023 – Present

Economics of AI (Emory), Development Issues in Africa (Emory), Mathematics (University of Ghana)

- Support students across courses; guide student development and provide individualized mentorship
- Designed supplementary content, including curated briefings on AI policy and African development issues

LEADERSHIP & SERVICE

Emory Ethics and Servant Leadership Forum Scholar | 2025 – Present

- Selected for a competitive leadership cohort focused on ethical decision-making and community impact
- Collaborated with an interdisciplinary team to design service projects benefiting Emory and Atlanta communities

Deputy Head, Academic Committee | UG Economics Students' Society | 2022 – 2023

- Developed a feedback system to identify student academic challenges and inform support programming
- Founded "UGESS Riddle of the Week," an initiative to build analytical thinking and community engagement

Invited Participant | Citizens' Convention, Ghana Compact Partners

SKILLS

Python · GitHub · LaTeX · Data Visualization · WRDS Data Extraction · Wolfram Mathematica · Prompt Engineering

AI and Brand

My research focuses on how innovations shape economic decisions at the firm and household levels. With the emergence of GPTs in today's society, it is important to understand the dynamics of their adoption in production and the associated costs. My current focus is on understanding Artificial Intelligence within the GPT framework. My research seeks to understand how investment in AI technologies as prediction machines is distorting investment in the firm's traditional brand capital. I introduce a theoretical model to develop a framework for answering when and why AI, as a low-cost predictive tool, becomes a complement or substitute in the firm's brand-building process. This will be the first model to theoretically explain the variation in firm-level AI adoption and its impact on firm traditional brand investment decisions. With the empirical application of this model, I hope to provide the first evidence of the AI-brand tradeoffs at the firm level.

After answering my current research question, which explores when AI prediction capability is used as a complement to traditional brand capital or when it is used as a substitute, the next question I will seek to answer is how investment in AI technologies for non-brand building activities is affecting investments in total brand capital at the firm level. This might also require a structural approach, in which I would develop a model to explain the dynamics and apply it to an empirical framework.

After answering these questions, I will examine how brand value investment affects brand value itself in an era of widespread adoption of AI, and compare this with an era when firms did not adopt AI in their production processes. I will compare pre-AI and post-AI mechanisms to derive a possible causal effect of AI adoption.

My research aligns well with the economics of innovation, and many of my subsequent ideas since the start of the current project have centred on how Artificial Intelligence is shaping our economic landscape. I am also interested in learning how past innovations have evolved over time, shaped economic thinking, and relate to the current AI era. These are exactly the things the NBER Innovation Research Boot Camp will give me a head start on. The tools and ideas that I will assimilate from this Boot Camp will become integral to developing clean research ideas that not only remain ideas but also become policy-relevant contributions. I am particularly excited about the opportunity to meet and work with a team of emerging scholars who are also interested in advancing their research. Meeting other "innovation-minded" individuals confirms that I am not alone in my desire to become an innovation researcher, and this would certainly give me the confidence I need to take my next significant step. The chance to be part of a team committed to the significant transformation we see in our economies today is compelling, and I want to seize it!

Jillian Grennan
Assistant Professor of Economics

Emory University
Economics Department
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Atlanta, Georgia 30307
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February 7, 2025,

Dear Selection Committee,

I am writing to offer my highest recommendation for Atta Domson for the NBER Summer Innovation Research Bootcamp. As Atta's primary PhD advisor and supervisor for his second-year paper, I have worked closely with him this past year and believe that he has excellent research potential, intellectual curiosity, and is a strong fit for this program.

Atta will be a rising third-year PhD student this summer. For his second-year research paper, he asked the research question "when and how does AI change the production function for brand value?" Prior to the PhD program, Atta had taken many graduate level mathematics classes. As a result, he was able to quickly understand the theoretical models in the previous literature looking at GPTs and use those insights to develop his own model for AI brand value. His model posits interesting economic tension arising from firm's underlying organizational capital (e.g., younger, digital-native firms without inertia will actually build and scale brand capital faster). This goes against the more traditional macro insight that there is a data feedback loop such that only the big firms will win in the AI economy. He is currently collecting data that seems promising for actually testing the model with quasi-exogenous variation. He will be using Pitchbook and startup firm data in this project.

Unfortunately, at Emory University, we do not offer an innovation economics class for PhD students. Atta does not know the nuance and details of the patent literature, of copyright law, or really more broadly how the science-of-science affects the direction of technical progress. Importantly, by attending this camp, he will learn what the interesting research questions are in this area. Being at NBER will also be an important cultural experience for him as he studied in Africa, not in the U.S., and so is still learning best practices for the dissemination of research. Given his strong interest in emerging technology and innovation, I think this would be the ideal time for him to participate in a program like the NBER Summer Innovation Research Bootcamp. I think he is promising and can hopefully write a great dissertation chapter related to innovation economics.

I give Atta a strong recommendation without reservation. He is hard-working, diligent, and creative. He represents the kind of promising young scholar who is likely to shape the future of innovation economics research. I am certain he will make excellent use of this opportunity and contribute meaningfully to the bootcamp community. Please feel free to contact me if you have any questions.

Sincerely,



Jillian Grennan, Ph.D.
Assistant Professor of Economics
Emory University