

# Taha Barwahwala

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## RESEARCH EXPERIENCE

- 2023- COLUMBIA UNIVERSITY New York  
*Staff Associate to Professor Eric Verhoogen*
  - Studying the role of labor policy and spatial clustering on the technological decision-making of firms in Bangladesh and Brazil.
- 2020-2023 JPAL SOUTH ASIA Chandigarh  
*Sr. Research Associate* (2021-2023)  
*Research Associate* (2020-2021)
  - Developing an end to end Random Forest classification solution in **Python** to find fraudulent registrations using a 4-year taxation dataset with 12.8 Mn. records.
  - Coordinating a field test of the RF classification solution which has resulted in the discovery of 550+ nonexistent firms and 900+ Cr. in potentially fraudulent tax credits till date.
  - Mentored project staff on research objectives and data management.
  - Compiled a note outlining potential directions for metadata repository compilation and data catalog development by the State Department of Governmental Reforms.

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## EDUCATION

- 2024 COLUMBIA UNIVERSITY New York  
*Non-Degree Post Baccalaureate*
  - Coursework: Introduction to Modern Analysis (
- 2019 MITx ON EDX Proctored  
*MicroMasters Certification in Data, Economics & Development Policy*
  - Coursework: Data Analysis for Social Scientists, Microeconomics, Political Economy & Economic Development, Designing & Running Randomized Evaluations
- 2013-2017 INDIAN INSTITUTE OF TECHNOLOGY, GUWAHATI Guwahati  
*Bachelor of Technology in Engineering Physics, Minor in Mathematics*
  - Coursework: Pattern Recognition & Machine Learning, Probability & Statistics, Information Theory, Linear Algebra, Multivariable Calculus, Modern Algebra, Real Analysis, Economic Theory

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## PUBLICATIONS

- 2024 USING MACHINE LEARNING TO CATCH BOGUS FIRMS  
(with Aprajit Mahajan, Shekhar Mittal, Ofir Reich)  
*ACM Journal on Computing and Sustainable Societies, Volume 2, Issue 3*
  - Using a rich dataset of tax returns in an Indian state over several years, we train an ML-based model to predict fraudulent firms. We then use the model predictions to carry out field inspections of firms identified as suspicious by the ML tool. Withholding a randomly selected group of firms from inspection, we estimate the causal impact of ML-driven inspections.

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## PROFESSIONAL EXPERIENCE

2017-2020 **AXIS BANK LTD**

Bengaluru

**Senior Manager** (2019-2020)

**Manager** (2017-2019)

- Recognised with a 'Team Excellence Award' in 2018 and 2020.
- Deployed a neural network-based alert prioritization solution in **Python** delivered through email notifications that 4x'd the number of compliance alerts processed/day. The predicted scores match the manual result ~70% of the time on the validation set.
- Developed middleware to standardize ~98% of delivery addresses for insurance policy documents, saving manual intervention time of 5-10 days per delivery.
- Developed an end-to-end Credit Card EMI Transaction prediction system, capable of identifying up to 70% of transactions against which EMI was taken out.

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## VOLUNTEERING

2023-

**JPAL SOUTH ASIA INDIA DATA CAPACITY ACCELERATOR INITIATIVE**

**Mentor**

2016-2017 **INDIAN INSTITUTE OF TECHNOLOGY, GUWAHATI**

Guwahati

**General Secretary, Students' Welfare Board**

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## OTHER

- Technical Skills: Python, SQL, PySpark, PyTorch, UNIX Shell Scripting