

# Meghanath Macha

## INFO

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MAILING ADDRESS: Apartment 8, 3 Bayard Road, Pittsburgh, PA 15213  
BORN: 28th July 1992  
PHONE: +14124820350  
EMAIL: [mmacha@cmu.edu](mailto:mmacha@cmu.edu)  
WEBSITE: <https://mmacha.github.io/>  
SCHOLAR: [Google Scholar](#) , [Justia Patents](#)  
LANGUAGES: English, Hindi and Telugu.

## RESEARCH INTERESTS

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I am primarily interested in understanding the socio-economic trade-offs of machine learning. Two such trade-offs I'm currently working on are interpretability and consumer privacy. My secondary interests lie in developing descriptive tools for marketers.

## EDUCATION

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AUGUST 2016 - PRESENT Doctor of Philosophy in INFORMATION SYSTEMS AND MANAGEMENT  
Carnegie Mellon University, Pittsburgh.  
COURSES Machine Learning, Statistics, Convex Optimization  
Data mining, Econometrics (All Ph.D level)  
  
AUGUST 2009 - 2014 Masters and Bachelors of Science in MATHEMATICS AND COMPUTING  
Indian Institute of Technology, Kharagpur , India  
INSTITUTE SILVER MEDALIST

## AWARDS

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1. **Suresh Konda Award** for best first research paper at Heinz, CMU.
2. **PwC Presidential Fellowship** for outstanding research and academic performance at CMU.
3. **Institute Silver Medal** for holding the highest GPA in my department during 2009-14.
4. **Professor K.L. Chopra award** for the best demonstrable Master's project at IIT Kharagpur.
5. **Best poster award** for the Machine Learning course project titled 'Detecting Fraudulent Reviews'.

## PROFESSIONAL EXPERIENCE

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MAY 2019 - AUGUST 2019 DATA SCIENCE INTERN, Data Science Lab, Adobe, San Jose.  
Worked on semi-supervised identification and summarization of marketing segments and critical event detection in online web sessions.  
Two patents and papers under preparation to be filed and submitted.  
  
MAY 2018 - AUGUST 2018 APPLIED SCIENTIST INTERN, AWS AI Labs, Amazon, Seattle.  
Worked on developing active learning techniques for the record linkage problem.  
  
MAY 2017 - AUGUST 2017 DATA SCIENCE INTERN, Data Science Lab, Adobe, San Jose.  
Worked on click-fraud detection which involved identifying fraudulent publishers and users.  
Paper published in ECML PKDD 2018.  
  
JUNE 2014 - JULY 2016 MEMBER OF RESEARCH STAFF, Digital Marketing Research, Adobe, India.  
Developed predictive, descriptive tools for marketers to efficiently target and evaluate marketing campaigns. Published three conference papers and six patents.

## RESEARCH PUBLICATIONS AND PATENTS

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### JOURNAL PUBLICATIONS:

1. **Meghanath Macha**, and Leman Akoglu, "X-PACS: Explaining Anomalies by Characterizing Subspaces." Data Mining and Knowledge Discovery Special Issue.

## CONFERENCE PUBLICATIONS:

1. **Meghanath Macha**, Beibei Li and Natasha Zhang Foutz, "Geo-Targeting, Privacy, and the Rise of Consumer Location Trajectories" Proceedings of ICIS 2019 (*To appear*)
2. **Meghanath Macha**, Deepak Pai and Leman Akoglu, "ConOut : Contextual Outlier Detection : An Application to Ad Fraud" Proceedings of ECML PKDD 2018
3. Atanu Sinha, **Meghanath Macha**, Pranav Manirekar, Sopan Khosla, Avani Samdhariya and Navjot Singh, "Anti-Ad Blocking Strategy: Measuring its True Impact". Proceedings of the 2017 AdKDD and TargetAd Workshop.
4. **Meghanath Macha**, Shiv Kumar Saini, and Ritwik Sinha, "Non-parametric Approach to the Multi-channel Attribution Problem" International Conference on Web Information Systems Engineering. Springer International Publishing, 2015.
5. Pai, Deepak, Abhijit Sharang, **Meghanath Macha**, and Shradha Agrawal, "Modelling Visit Similarity Using Click-stream Data: A Supervised Approach." International Conference on Web Information Systems Engineering. Springer, 2014.

## PATENTS:

1. **Meghanath Macha**, Shiv Kumar Saini, Ritwik Sinha, "Value Function-based Estimation of Multi-channel Attributions"
2. **Meghanath Macha**, Ritesh Noothigattu, Shivam Garg, Abhishek Kandoi, Dr. Atanu Sinha, "Buying Stage Determination in a Digital Medium Environment."
3. **Meghanath Macha**, Ritwik Sinha, Shiv Kumar Saini, "Simulation-based Evaluation of a Marketing Channel Attribution Model."
4. Deepak Pai, Abhijit Sharang, **Meghanath Macha**, Shradha Agrawal, "Visitor Session Classification Based on Clickstreams"
5. Atanu Sinha, Sopan Khosla, Pranav Ravindra Maneriker, **Meghanath Macha**, Avani Samdhariya and Navjot Singh, "A Method to Quantify True Effectiveness of Site-Wide Actions Using a Control Group Mechanism."
6. **Meghanath Macha**, Moumita Sinha, Kokil Jaidka, "Conversational Index for Email Marketing Campaigns."
7. Leman Akoglu and **Meghanath Macha**, "Explaining Anomalies by Characterizing Subspace Rules."

## PRESENTATIONS

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1. **Explaining Anomalies by Characterizing Subspaces**, ECML PKDD 2018, Dublin, Ireland.
2. **Contextual Outlier Detection : An Application to Ad Fraud**, ECML PKDD 2018, Dublin, Ireland.
3. **Explaining Anomalies by Characterizing Subspaces**, Heinz School of Information Systems and Public Policy, CMU.
4. **Modelling Visit Similarity Using Click-stream Data: A Supervised Approach**, 15<sup>th</sup> International Conference on Web Information and System Engineering (*WISE*) 2014, Thessaloniki, Greece.
5. **Learning Online Session Similarities**, Adobe Tech Summit, San Francisco, 2015
6. **From Data to Insights**, Adobe Marketing Summit, Salt Lake City, 2015.

## TEACHING

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TEACHING ASSISTANT, Data Structures and Algorithms course Spring & Fall 2019, Fall 2018, (Michael McCarthy, CMU).  
TEACHING ASSISTANT, Decision Making under Uncertainty & Fall 2019, Fall 2018, (David Choi, Alexandre Jacquillat and Jonathan Caulkins, CMU).

INTERNSHIP MENTOR, Digital Marketing Research, Adobe, India.

## SKILLS AND COURSEWORK

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### PROGRAMMING LANGUAGES

Python (4/5), R (4/5), C++ (3.5/5), Matlab (4/5)

### COURSE PROJECTS

Detecting Fraudulent Reviews (Machine Learning)  
Portrayal of a fraudster (Data Mining)  
Recommending Bundles in Consumer-Product Networks (Convex Optimization)