Harnessing the Power of Data

Ameet Talwalkar
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CURRENT RESEARCH

Addressing challenges in statistical machine learning to make data useful

We are undoubtedly living in the Age of Data, where data is power and currency. The massive and complex datasets being collected via the Internet and scientific domains, including genomics, astronomy, physics, and finance, hold the promise for many transformational applications, and machine learning techniques are seemingly poised to deliver on this promise. However, concerns over scalability and ease-of-use present major roadblocks to the wider adoption of these statistical methods. For instance, modern genomic sequencing technologies can rapidly generate hundreds of gigabytes of raw data for a single individual, yet the cost to analyze this data is emerging as a major obstacle in eventually achieving the goal of personalized medicine. As a second example, measuring customer activity is no longer a practice limited to pioneering companies like Google and Netflix, yet many organizations lack the statistical expertise required to make actionable decisions from their data.

Dr. Ameet Talwalkar, Assistant Professor of Computer Science at the University of California, Los Angeles, addresses scalability and ease-of-use issues like these, and aims to ultimately connect advances in machine learning back to the real problems in science and technology. Having led the initial development of MLlib, a leading distributed machine learning library that is part of the Apache Spark project, and having co-authored a graduate level textbook about machine learning called *Foundations of Machine Learning*, Dr. Talwalkar is fully equipped with both the knowledge and the expertise to tackle these challenges. He continues to educate researchers and practitioners through his massive open online course (MOOC) on edX as well as...

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AFFILIATION

University of California, Los Angeles

AWARDS

- NSF Office of Cyberinfrastructure (OCI) Postdoctoral Fellowship, 2011
- Janet Fabri Prize for best doctoral dissertation in NYU's Computer Science Department, 2011
- Henning Biermann Award for exceptional service to NYU's Computer Science Department, 2008
- Yale Computer Science Undergraduate Prize, 2002
- Westinghouse Science Talent Search Scholarship, 1998

RESEARCH AREAS

Technology, Computational Sciences / Mathematics, IOT, Devices, Data

FUNDING REQUEST

Dr. Ameet Talwalkar is a new faculty member actively recruiting Ph.D. students and postdocs to join his group at the University of California, Los Angeles. Each student and postdoc requires roughly $80K/year, and your contributions will help build a team of talented individuals to conduct interdisciplinary work in statistical machine learning and distributed systems. Be part of the technological revolution as Dr. Talwalkar delivers machine learning as a robust and easily accessible tool for transformational applications.