

Akash Alok Mahajan

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EDUCATION **Stanford University (MS)** Management Science & Engineering Dept. Stanford, CA
Concentration: Data Science, Technology & Engineering Management; **GPA: 4.0** 2016-2018

- Machine learning
- Introduction to databases
- Mining massive datasets*
- Strategy in technology based companies

*Ongoing

Indian Institute of Technology Madras (IIT Madras) (B.Tech.) Chennai, India
Major: Chemical Engineering, Minor: Systems Engineering; **GPA: 8.8/10** 2011-2015

- Multivariate data analysis
- Modern control theory

SUMMARY I enjoy work at the intersection of data and products. On the lookout for internships for 2017 in the same

Languages: R, Python, SQL, C/C++, Java, HTML, MATLAB
Software: Hadoop*, Torch7, Keras, Shiny, Processing

WORK EXPERIENCE & PROJECTS

Ather Energy **Data Scientist** Bangalore, India
Smart electric scooters: Part of the first vehicle intelligence team of 2 Jul 2015 – Jun 2016

Product development

- Defined and iterated on features, working closely with engineering, design & business teams
- Personally conceived of and developed prototypes in R for 3 features
- Managed development with a design firm for an immersive data visualization of test rides

A system for predicting drivetrain health from motor currents (Provisional Patent Appl.#201641003419)

- Prototyped a system in R using spectral analysis and logistic regression to distinguish good and faulty transmissions
- Mentioned at the product unveiling at the [2016 Web Summit Surge](#) conference in Bangalore, India

Locating speed bumps from accelerometer sensor data

- Prototyped a system in R using random-forests classification on feature engineered temporal data followed by spatial clustering (~95% precision)

Characterizing a user's unique riding style – 'Rider Profiling'

- Developed and tested metrics using features extracted from 15 different sensor measurements: gyros, throttle etc.
- Built visualization prototypes in R, Shiny and Processing

Predible Health **Internship** Bangalore, India
Automated waveform annotation of ECGs using ConvNets Jun – Jul 2016

Deep learning

- Built a proof-of-concept for a leading healthcare BPO automating QT annotation of ECG data
- Trained ConvNets in Torch on MIT Physionet dataset. Performance **comparable to human experts**

ACADEMIC PROJECTS

Quantifying osteoarthritis severity from X-rays Machine learning course, Stanford

- Explored the use of ConvNets and other machine learning models to predict 5 KL-grades from knee X-ray images
- Best model achieved an F1 score 41% and correlation of 58% on labelled grades, within 10% of the state-of-the-art

Auctionbase – an online auction system Introduction to databases course, Stanford

- Designed a database schema and constraints from unstructured eBay JSON data and implemented in SQLite
- Built a web-application using *web.py* allowing users to view and interact with the database and place bids

Integrated Set-Point Learning with Iterative Learning Control B.Tech. Research Thesis, IIT Madras

- Proposed a robust control scheme automating quality-based setpoint selection (implemented in MATLAB, Simulink)
- Results accepted for presentation at the [2015 AIChE Annual Meeting](#) conference