

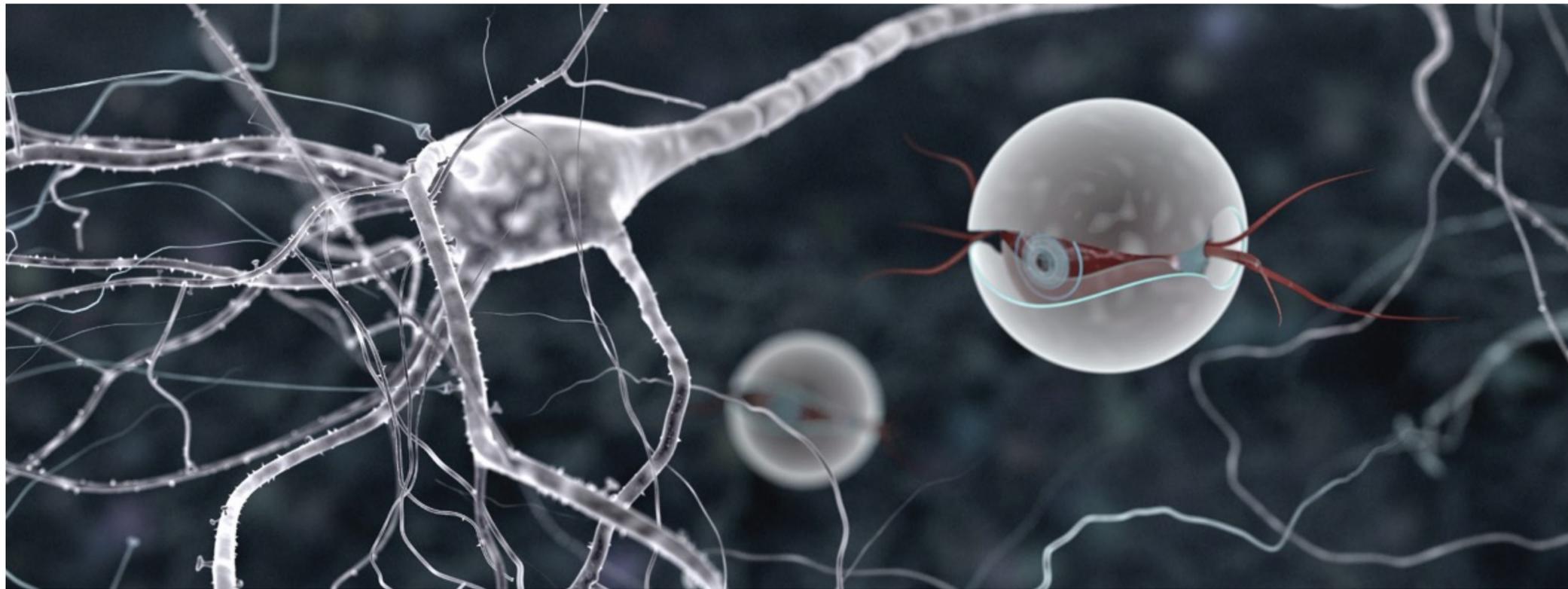
Fact sheet

Tractable



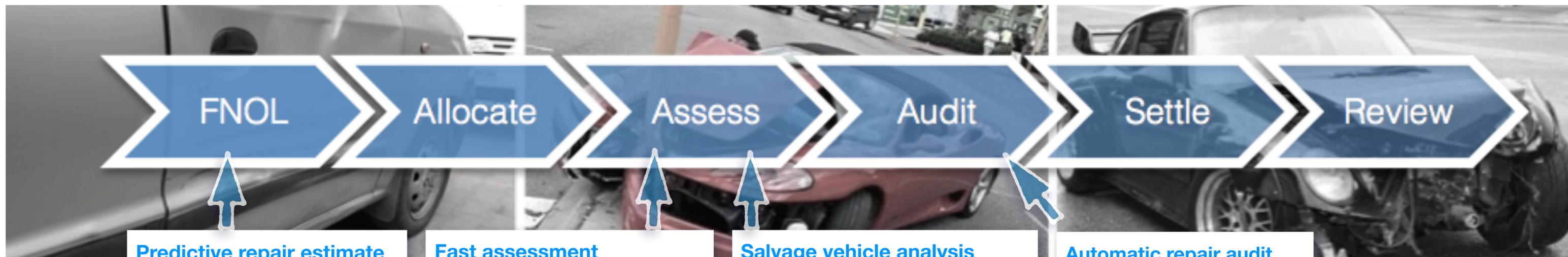
Automating visual recognition tasks with Artificial Intelligence

Tractable enables computers to see better than humans



We develop **artificial neural networks** capable of recognising objects in cluttered, noisy settings. Our convolutional neural networks can process imagery of all forms, such as spectral, IR, ultrasound and X-ray.

Use case: automate motor claims



Predictive repair estimate

Higher write-off accuracy
Order replacement parts early and direct job to optimal body shop
Option to offer instant cash settlement

Save >\$50 to the insurer
Reduce k2k by 1.5 days

Fast assessment

Guide repairer through minimal required assessment for high repair cost confidence
Build on customer generated estimate at FNOL for maximum speedup

Save \$20 to the bodyshop
Improve cycle time

Salvage vehicle analysis

Determine the non-damaged parts on a salvage vehicle that could be sold on the parts-market

Generate \$40 for parts owner
Increase parts liquidity for the industry

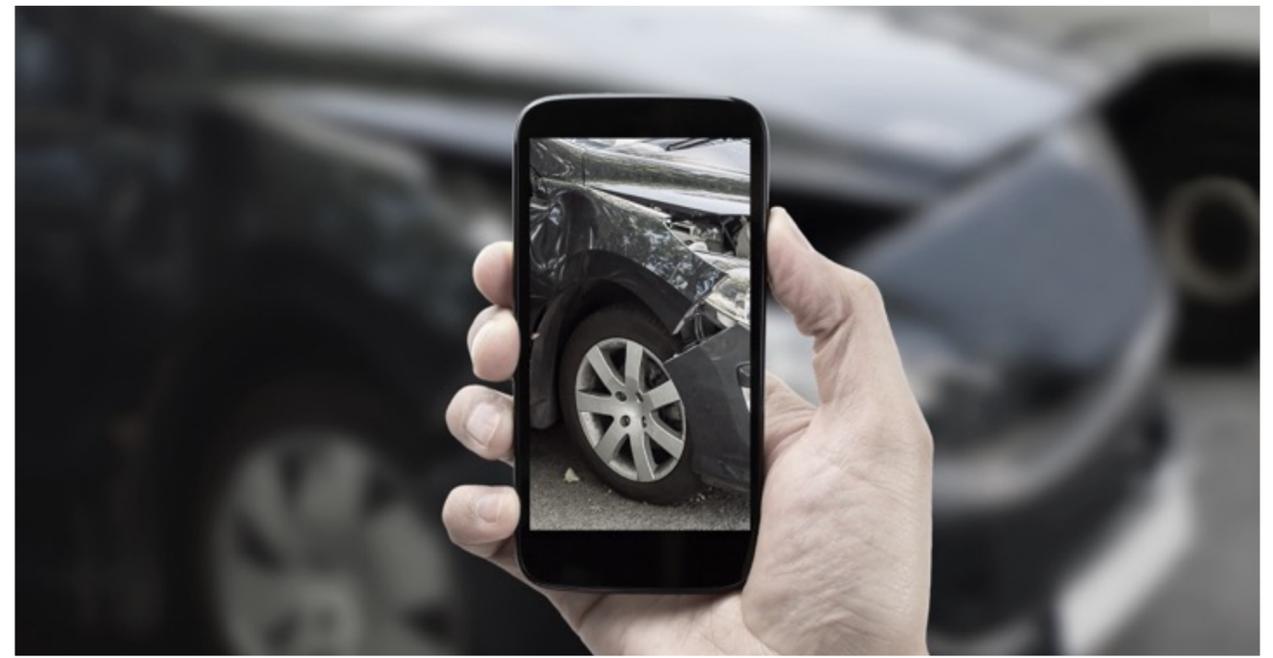
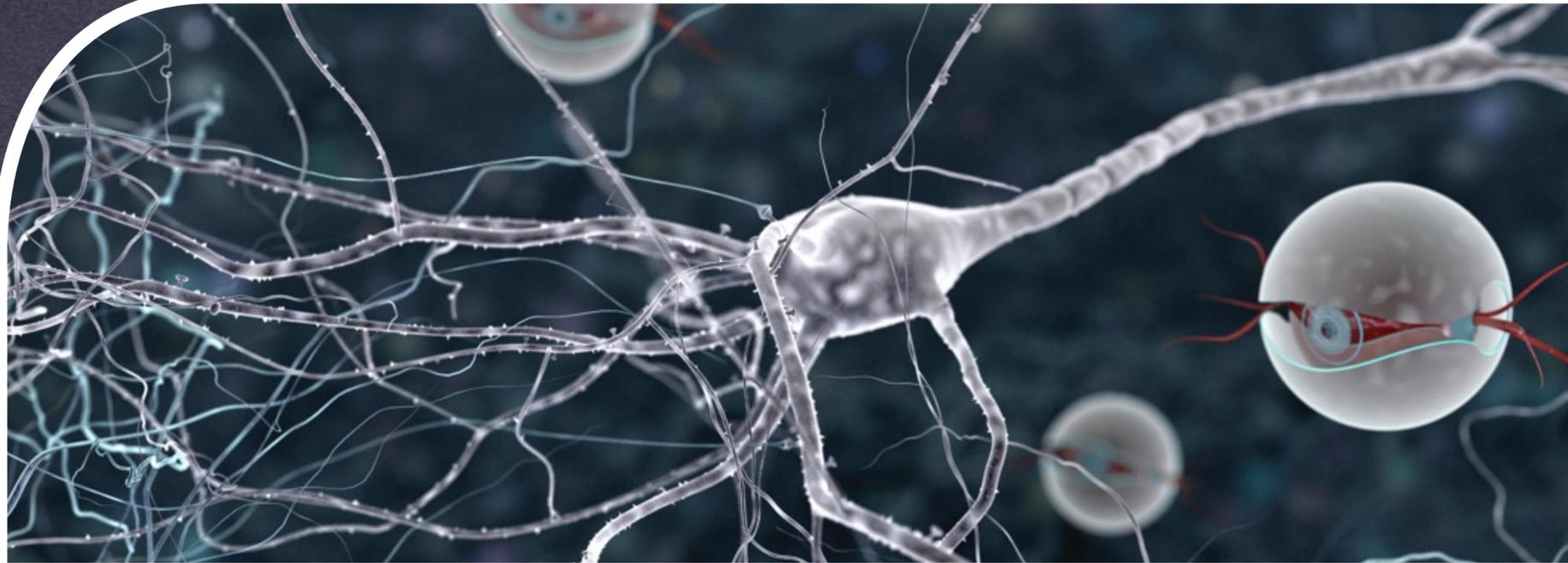
Automatic repair audit

Verify that quoted labour times visually correspond to extent of damage

Save \$150 to the insurer
Reduce premiums for policyholder

Optimise workflow:
improve customer journey

Motor claim market size: **2.3 million** UK, **26 million** USA



Tractable is in a leading position for delivering this technology

- 1) Deep learning is necessary**, as it is the only way of training image classification algos that can cope with the variations in lighting, background and car models. These are necessary for the tech to operate in a smartphone / FNOL setting.
- 2) Deep learning talent is rare and expensive:** Google paid \$650M to acquire DeepMind last year, who had 12 of the world's leading deep learning researchers.
- 3) We are the only builders of deep learning products:** the deep learning teams at Google, Facebook, Microsoft and Baidu are motivated by fundamental research in AI and producing academic papers. we are committed to engineering commercial products.
- 4) We are solving the image annotation problem:** deep learning algo's need to trained with tagged images. motor claim images are tagged with repair operations at the claim level, not the individual image level. we are solving this with proprietary tech that is under patent application.

Team

Tractable was founded 9 months ago by Alex Dalyac of Imperial College and Razvan Ranca of the University of Cambridge.

In June 2015 we closed a \$1.9M seed round led by Zetta Venture Partners. Greg Gladwell, ex-CEO of Crawford & Co UK / Ireland, the #1 independent claims management company, is an investor and advisor.

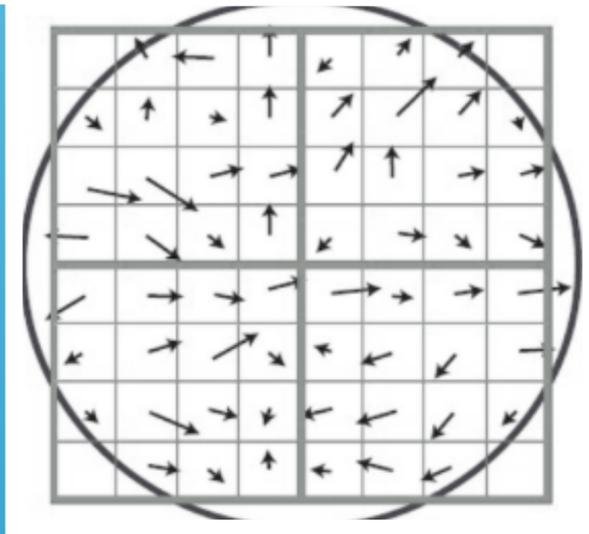
We are a team of 6 deep learning specialists and 2 business developers. Our vision is to be the world-leading provider of machine learning software, with a focus on automating visual recognition tasks. We are based in London and plan to open an office in the US over the coming months.



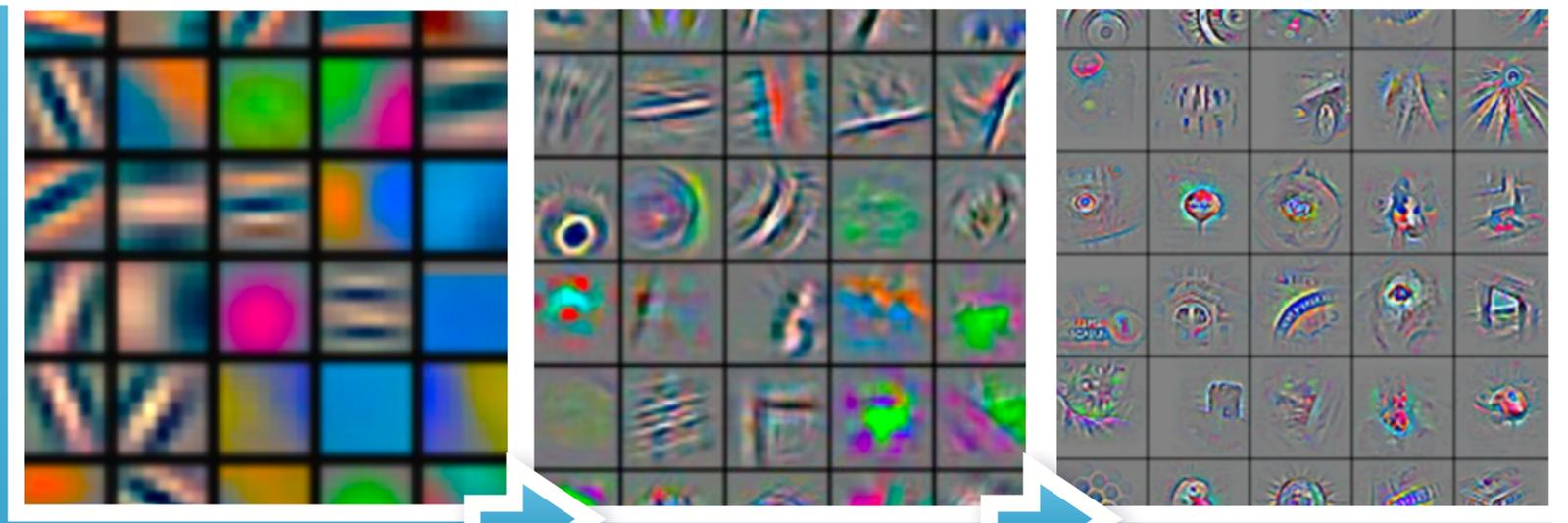
Imperial College
London



Traditional Computer Vision VS Tractable's Deep Learning



A SIFT feature



Deep learning features

Computer Vision/Machine Learning

In traditional computer vision, programmers define the features. This is very difficult to do. The best programmer-defined feature set is SIFT, which contains only 128, low-level features. These features are not very diverse, they are just various types of corners and edges.

VS

Tractable's Deep Learning technology

We make our AI solve a mathematical optimisation problem on the dataset to make it learn the best 1024 low level features, the best 2048 mid level features and the best 4096 high level features. These features are more diverse, combining edges, corners, textures and colours. Moreover, upper level features feed from features of the level below, building increasingly complex features that are impossible for a programmer to define. These successfully capture variation in viewpoint, clutter, scale, object shape, lighting and reflections.

Tractable

Automating visual recognition tasks with Artificial Intelligence

Building and integrating powerful AI technology is our core business. We are here to help you improve your operations.

For enquiries and joint research projects
contact@tractable.io