

# Yu Yeung Scott Yiu, PhD

www.scottyiu.com ◊ <https://github.com/yysy2>

## CAREER AND EDUCATION

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### De Beers Group

**Data Scientist, Pricing & Development**

*2019 - Present*

- Responsibility include **adding advanced analytics and data science** to the pricing decision process, providing an **internal data science consultancy service** to the wider department and **presenting projects and findings to Global Sightholder Sales VPs.**
- **Lead multiple data science projects** including:
  - Forecasting customer refusals and reactions to diamond price changes
  - Automated recommendation system for pricing decisions
  - Segmenting diamond price changes according to 4Cs characteristics
  - Automated sentiment index using NLP and web scraping
  - Webapp platform for data science projects

### University of Cambridge

**Postdoctoral visiting researcher**

*2019*

**Postdoctoral research associate**

*2018 - 2019*

**PhD in atmospheric sciences, Chemistry**

*2014 - 2018*

- Investigated the impact of El Niño Southern Oscillation on the Amundsen sea region and novel applications of **machine learning** to predict Stratospheric Column Ozone and North Atlantic Oscillation.
- Work published, submitted and in preparation to world-class journals in atmospheric sciences including *JCLIM*, *QJRMS* and *Earth Sci. Front.*.

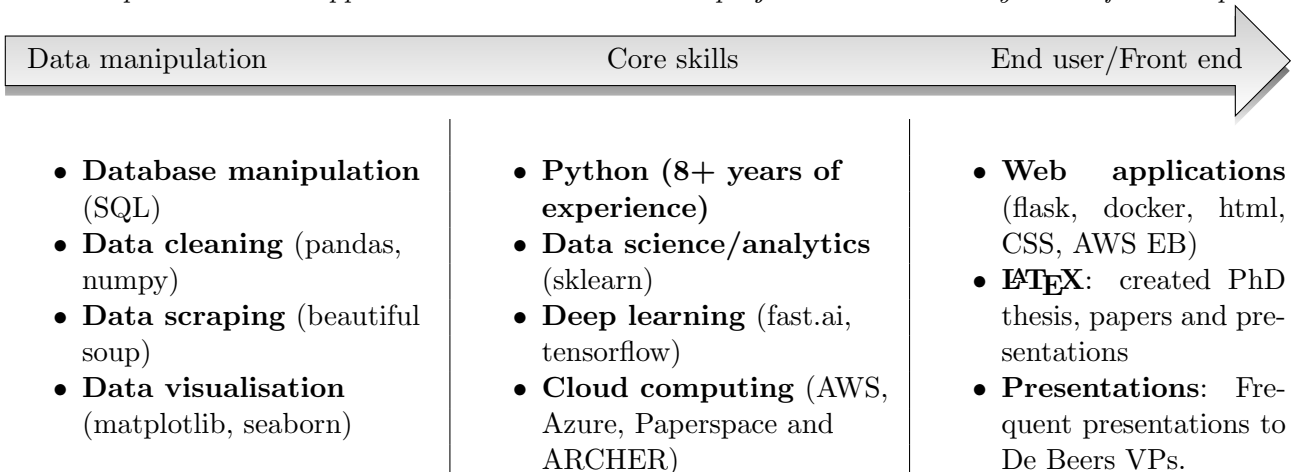
**BA and MSci in Physics (2.1 classification)**

*2009 - 2013*

## DATA SCIENCE, MACHINE LEARNING AND COMPUTATIONAL SKILLS

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*Full stack data scientist: experience with producing ‘end to end’ data science projects. From raw data to operational web applications - see ‘data science projects’ on [www.scottyiu.com](http://www.scottyiu.com) for examples.*



## DATA SCIENCE EXPERIENCE AND SELECT KEY PROJECTS

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- **Computer vision:**
  - Enhancing blurry images using neural networks ([www.scottyiu.com](http://www.scottyiu.com))
  - Colorizing images using neural networks ([www.scottyiu.com](http://www.scottyiu.com))
  - 2D projections of ozone changes from anthropogenic emissions (Ongoing academic research)
- **Structured data:**
  - Forecasting customer refusals and reactions to diamond price changes (De Beers)
  - Automated recommendation system for pricing decisions (De Beers)
  - Segmenting diamond price changes according to 4Cs characteristics (De Beers)
  - Projections of stratospheric ozone changes in the tropics (Published academic paper)
- **NLP and Collaborative filtering:**
  - Automated sentiment index for the diamond industry (De Beers)
  - Character and word level models based on IMDB reviews and Nietzsche ([fast.ai](http://fast.ai))
  - Movie recommendation based on IMBD ([fast.ai](http://fast.ai))
- **Kaggle competitions:**
  - House Prices regression (top 27% ranking - 2019)
  - Humpback whale identification (mean average precision of over 0.41)
  - Digit recognition (over 99.5% accuracy) (<https://www.kaggle.com/scottyiu>)

## ADDITIONAL SKILLS, LANGUAGES AND NATIONALITY

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- **Teamwork:** tackling the diamond pricing cycles with other analysts and diamond consultants within the P&D team, De Beers. Collaborated with scientists from Cambridge University, UK Met Office, Imperial College London, Karlsruhe Institute of Technology and Leeds University
- **Conferences:** presented at multiple international conferences (San Francisco, Tsingdao, Barcelona)
- **Languages:** English, Mandarin and Cantonese
- **Nationality:** British, Hong Kong and Mainland China (right to work)

## PUBLICATIONS

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- J. Keeble, **Y.Y.S. Yiu**, A. Archibald, F. O’connor, A. Sellar, J. Walton and J. A. Pyle, 2020. Using machine learning to make computationally inexpensive projections of 21st Century stratospheric column ozone changes in the tropics. *Earth Sci. Front.* (<https://doi.org/10.3389/feart.2020.592667>)
- **Y.Y.S. Yiu**, J. Keeble, P.J. Nowack, P.T. Griffiths, J. A. Pyle, 2021. Using machine learning to make skillful predictions of the winter time NAO. In Prep.
- **Y.Y.S. Yiu**, A.C. Maycock, 2019. The linearity of the El Niño teleconnection to the Amundsen Sea region. *QJRMS.* (<https://doi.org/10.1002/qj.3731>)
- **Y.Y.S. Yiu**, A.C. Maycock, 2019. On the seasonality of El Niño Southern Oscillation teleconnection to the Amundsen sea region. *JCLI.* (<https://doi.org/10.1175/JCLI-D-18-0813.1>)
- P. Trascasa–Castro, A.C. Maycock, **Y.Y.S. Yiu**, J.K. Fletcher, 2019. On the linearity of the stratosphere and Euro–Atlantic sector response to ENSO. *JCLI.* (<https://doi.org/10.1175/JCLI-D-18-0746.1>)
- **Y.Y.S. Yiu**, A.C. Maycock, J.A. Pyle, P. Braesicke, 2018. El Niño Southern Oscillation teleconnections and their effects on the Amundsen sea region. (<https://doi.org/10.17863/CAM.23516>)