Duncan Andrew Clark

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Experience

Facebook Inc. - Infrastructure Data Science Intern **June 2020 – September 2020**

- **Project:** Client side app performance metric regression prediction.
- Demonstrated results to software engineers, achieved false positive reduction from ~50% to ~10%
- Built, tested and iterated on predictive models using complex, noisy beta testing data.
- Adapted quickly to Facebook scale ~billion line data, learned internal tools, machine learning workflows
- Communicated complex statistical models to software engineers, generated discussion and feedback

University of California Los Angeles - Teaching Fellow **September 2018 – Present**

- Teaching college statistics labs, developed original material resulting in enhanced student understanding
- Assigned, devloped and graded lab assignments, tailoring to increase depth of learning.
- Advised students on academic and personal issues and directions, building relationships and trust

University of California Los Angeles - Grader **September 2017 – June 2018**

- Accurate, reliable and on-time grading of lab assignments.

Xafinity Consulting, UK - Actuarial Associate, **September 2015 – September 2017**

- **Student Member, Institute and Faculty of Actuaries (IFOA) – UK actuarial professional body**
  - Passed CT1-8 all on first attempt (average pass rate ~ 50%). Excellent financial background knowledge.
  - CT8 Financial Mathematics: CAPM, option pricing, interest rate modeling, credit risk modeling
- **First 4 months focused on carrying out traditional pensions actuarial work**
  - Modeled pension scheme liabilities precisely, working with complex messy data.
  - Improved team efficiency by streamlining work allocation for a large client.
- **Selected, based on technical skills, for specialist insurance modelling team**
  - Worked within a tight knit modeling team, meeting tight deadlines providing mission critical material.
  - Analyzed benefit specifications for complex pension schemes.
  - Communicated complex scheme specific features to clients. Salient points highlighted.
  - Managed individual workload between general actuarial team and specialist modelling team.

Education

PhD Statistics, University of California, Los Angeles (UCLA) **2017 – 2022 (Expected)**

- **Research area**: Stochastic modelling of social networks. Extending current statistical models to improve understanding of social structure. Bootstrap methods, Bayesian inference and model selection for networks. Developing modelling software in R and C++.
- **LOLOG Catalog Project**: Verified power of cutting-edge social network model. Requested network data from more than 20 authors, understood context, processed data, fit complex stochastic models, suggested improvements to parameter estimation. To be submitted for publication.
- **Bayesian LOLOG Project :** Developed MCMC algorithm with model specific second order information, to provide full Bayesian inference for an intractable model. To be submitted for publication.
- **Coursework**: Machine Learning, Statistical Programming, Theoretical Statistics, Causal Inference, Latent Variable Modelling, Regression and Classification Algorithms, Point Process Models, Neural Networks

MSci Mathematics, University College London (UCL), UK **2011 – 2015**

- Classification: 1st Class Honors (US equivalent - 4.0 GPA).
- Masters thesis – Differential geometry on minimal surfaces. Independent research and learning.

Exchange Program, University of Washington, Seattle **2013 - 2014**

Skills

Coding: R, Python, SQL, C++ (Basic), Unix (Basic)

Hobbies and Interests

Economics, Always reading around, interested in different viewpoints and evidence based policy solutions.
Cycling, Cat 1 license, 1st overall in Western Conference 2019. Regular ride organizer.
Cooking, Enthusiastic chef and inquisitive patisserie, always trying new cuisines, techniques and ideas.
Unicycling, Keen unicyclist and 2016 UK unicycle road race champion, awarded GCN “Wattage Bazooka”.
Cricket, Test Match Special super fan and all-round cricket statistics geek.