Thomas Kirk MEng DPhil

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Education

- 2017 - 2021: DPhil Biomedical Engineering, Madgalen College, Oxford University

    - Holder of the Bellhouse scholarship, researching novel analysis methods for perfusion imaging data to improve diagnosis of Alzheimer's disease and dementia.
    - 2 publications, 1 patent and 3 software modules released.
    - Separately, was involved in producing two Covid-19 response projects (see employment below).

- 2013 - 2017: MEng Engineering, Economics & Management, Trinity College, Oxford University

    - First class honours, winner of Millard scholarship and Knox prize for best degree result.
    - Specialisms in biomedical and information engineering, as well as macroeconomics and game theory.

- 2007 - 2012: Dulwich College, London

    - 3 A at A2 level, 7 A* at AS level, 11 A* at GCSE, attended on scholarship.

Employment

- January 2021 onwards: Co-founder and technical lead, vaximap.org

    - Solo development effort for a free-to-use service to optimise Covid-19 vaccination for housebound patients
    - To date, has reached over 30% of UK housebound patients and been adopted by the UK Army
    - Project supported by Microsoft, JHubMed (UK Strategic Command) and Oxford University Innovation.

- March - June 2020: Lead system integration engineer & chief morale officer, OxVent, Oxford

    - Oversaw system integration for Oxford University's emergency Covid-19 ventilator, of which the UK Government ordered 6,000 units.
    - Also responsible for design verification data analysis, system calibration, and authoring multiple technical documents submitted for MHRA and FDA authorisations.
    - Partnered with Smith + Nephew UK for manufacturing, worked closely with their operations team to reduce manufacturing time down to 45 seconds per unit.
    - Project was awarded the 2020 *Global Challenge* innovation award from the Institute of Engineering and Technology.

- July 2014-19: Engineering tutor, Oxford Summer College / Oxford Royale Academy / Varsity Education

    - Planned and delivered maths and physics courses to introduce students to university-level engineering
    - Devised, budgeted and led practical projects to build a potato cannon and portable speakers
    - Ran sports activities and sightseeing trips for students

- 2012 - 2013: Maths teacher, Isle of Sheppey Academy, Kent

    - Recruited on Teach First style program to a school in special measures to teach GCSE maths
    - Lobbied the board of governors to let me teach the gifted and talented set alongside my other classes, doubled number of A* grades
    - Responsibilities included parent evenings, writing reports, organising school trips and running extra-curricular and sports activities

Skills, languages and awards

- Native French speaker, dual French and British citizen.
- Experienced in Python (Django, Pandas, Tensorflow), Ruby (Rails), MATLAB. Intermediate level Swift, C/C++, HTML and CSS. Personal github: https://github.com/tomfrankkirk
- Developed a Rails web app to be used for teaching medical students at the University of Oxford: page 9 in PDF
- Winner, 2020 Institute of Engineering and Technology *Global Challenge* innovation award for work on Covid-19.
- Winner, 2014 Sladen essay prize: "Should governments pursue growth or happiness?"
- Winner, 2011 Shalheveth Freier international physics tournament in Tel Aviv.
- Alumnus (2012) of the Arkwright national engineering scholarships program.