

# Dan Wendon-Blixrud

University of Cambridge

## EDUCATION (A LEVELS, UNI)

A\* Computer Science      A\* Mathematics  
A\* Further Mathematics      A\* Physics

Computer Science, BA Hons, 2021-2024  
University of Cambridge, Queens' College

## PERSONAL DETAILS

DOB: 2002/09/03  
drw48@cam.ac.uk

[github.com/dantechguy](https://github.com/dantechguy)   
[stackoverflow.com/u/9063935](https://stackoverflow.com/u/9063935) 

## RECENT PROJECTS & TECHNICAL SKILLS

2022 **PC remote-access app** / C++, QT, Java, Kotlin, Android, AES & RSA

- Prototyped in C++, developed into Kotlin and Java mobile client and desktop server
- Emulates custom input devices, e.g. tablet + stylus as graphics tablet, phone as a trackpad
- Designed and implemented secure custom AES & RSA based network protocol
- Received full marks as my A-Level project

2022 **Production-ready remote-access app** / Flutter, Dart, Windows API, MacOS Quartz

- Re-made with Flutter for full cross platform support, native API interfacing with custom plugins
- In talks with companies interested in custom integration with their workflow
- Supports device screen and webcam streaming, multi-user gamepad emulation

2022 **Auto face-tracked video captioning** / NodeJS, JS, HTML, CSS

- Led a team of 4 to win 24-hour hackathon's major sponsor prize
- Developed browser extension for automatic face-tracked, multi-speaker captioning on web videos

2022 **Production-ready revision app** / Flutter, Dart, Firebase, iOS, Android

- Improving over stale flashcard app market by with a focus on social and little-and-often learning
- Reactive UI programming with Flutter framework
- Data sync, social interaction, and auth via Firebase

2022 **Power-user to-do app** / Flutter, Dart, SQL, iOS, Android

- Highly focussed on "What can I do right now?", for people with many dependency-related tasks
- Custom dependency resolution algorithms shows only actionable tasks

2021 **Assembly GameBoy game** / z80-esc assembly

- Faithful re-creation of Flappy Bird with 8KiB RAM using only assembly
- Enjoyed gaining a holistic understanding of the system with the original 1999 documentation

2021 **Live real-time multiplayer game** / NodeJS, JS, Redis, custom rendering framework

- Three iterations refined different approaches to real-time sync, state management, and reactive UI
- Custom server-side rendering and small-scale microservices design

2021 **Generalisable game solver** / Python, Dart, GUI

- Probabilistically finds optimal winning solution for any game from any position
- Highly optimised custom graph analysis to properly handle cycles with memoisation and branch pruning
- Self-learning to adjust to any opponent and maximise win probability

2019 **Scratch to Python transpiler** / Python, metaclasses, PyQT5

- Source-to-source compilation and intuitive API for teaching kids to program – used in school
- Individually developed PIP libraries built upon each other for event handling, GUI, and compilation

Additional Skills

- OCaml and functional programming with small projects and university assigned practicals
- Git & Github for version control and codebase management
- Networking with IP, TCP, UDP, server-client systems
- Encryption theory and practical, AES, RSA, ECC
- Web with RESTful APIs, HTTP methods
- GTD methodology for high pressure productivity and organisation

## LEADERSHIP & ACHIEVEMENTS

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- 2022 **Stack Overflow student ambassador** for Cambridge University, running and organising inter-year social events and hackathons.
- 2022 **Won Cambridge University hackathon prize** as a first-year first-time team out of 28 teams. Project management, delegation, communication, and adaptability needed to get each module developed independently to spec, and later combined into the final product.
- 2021-present **Elected Cambridge student representative** for computer science two years running. Reliability, communication skills, and proactive agency needed to work with teams of staff and students to raise, discuss, and solve large-scale issues and run year-wide events.
- 2019 **Awarded Arkwright engineering scholarship** for computer science, one of only 400 people in the country. Received project funding, cyber security training and industry exposure.
- 2019-2020 **Certificates of Excellence in Computer Science** and Mathematics awarded by Suffolk One Sixth-Form College.
- 2017-2019 **Raised £4000** by developing software for charity events

## EXPERIENCE

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- Itineris**  
2018-2019 **Fast-paced team web development**, using PHP and CMSs for full-stack development. Worked on real client websites worth £100K+, and during work experience created an automation system to speed up mass media uploads by 500%. Was consequently invited back for a summer position.
- Agent3**  
2020 **Python, Docker, and big data** processing at a digital ABM company. Created a Python automation tool which is actively used to setup and launch configurable Docker containers on their Raspberry Pi cluster.
- CyberFirst**  
2020 **GCHQ cyber security training** with cyber forensics industry experts. Learned advanced theory on encryption, malware, and data obfuscation, as well as practical skills in penetration testing, OSINT, and forensic data recovery