ZELLA BAIG

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EDUCATION & AWARDS

University of Oxford, St. Hilda's College - MPhys Physics *2019 - 2023*
- 86% first year average
- St. Hilda's College Scholarship in Physics (academic scholarship based on performance)
- Crankstart Scholar (widening participation scholarship based on household income)
- Apollo Scholar (widening participation scholarship based on academic performance)
- Peer Supporter (Trained student welfare role) *2021 - Present*

d'Overbroeck's Sixth Form *2016 - 2018*
- 5 A Levels: Maths - A*, Further Maths - A*, Economics - A*, Physics - A*, French - B

Oulder Hill Community School *2016*
- 11 GCSEs A*-A including English, Maths, and Science

EXPERIENCE

Pupil Misconceptions: Circuits & Voltage (Report author) *Jan 2021 - Apr 2021*
- Conducted research into electrical misconceptions using 2 secondary school physics cohorts
- Evaluated existing teaching against further educational research in electronics
- Identified key areas in which pupils struggle in dealing with circuits
- Provided reccomendations to partner school to bolster their GCSE physics programme

The Brilliant Club (Charity and Development Intern) *Dec 2020*
- Aided the design of a maths program based upon cartesian geometry for secondary students
- Designed and recorded a physics presentation based on heat engines targeted at A level students
- Reviewed diversity provisioning and made reccomendations for more inclusive operations

OxFizz (Widening Participation Intern) *Aug 2020*
- Created a month long research report on barriers for disadvantaged Oxbridge applicants with 2 other interns
- Conducted research through provider interviews and student questionnaires distributed to $\sim$ 500 students
- Investigated existing access provisioning and identified lacks therein, presenting these gaps graphically
- Provided reccomendations for future access support programmes, bearing in mind resource constraints
- Outlined and began development of a long-term student roadmap resource for Oxbridge applications

World Experience Exchange (Research Intern for Kids Club Kampala) *Jun 2020*
- Analysed an existing off-grid $\sim$ 640W PV system in for bottlenecks in hardware
- Identified hardware limitations of (lead-acid) batteries and charge controllers in the current setup
- Researched power solutions for existing and future needs, requiring up to $\sim 2,500$Wh daily
- Liased with local organisations to determine possible training and funding for the project

Citizens Advice (Campaigns and Research Intern) *Apr 2020*
- Decomposed regional client profile trends ($\sim$ 6,000 entries) using spreadsheet software and Python
- Identified at-risk client demographics over a 6 month dataset
- Analysed the impact of COVID-19 on service usage
- Presented reports based on research to be used in targeting specific demographics of userbase

Slipstream (Oxford Team Member) *Mar 2020 - Present*
- Co-ordinate student mentoring & promotional program with several team members
- Collaborate with national group members to help expand outreach work

Cropper (Developer) *Summer 2019 - Present*
- Created terminal program for *nix systems to edit media files
- Maintain Cropper in the Arch Linux User Repository
- Extended skills to develop various utility scripts such as bulk renaming

British Heart Foundation, Oxford (Volunteer) *Aug 2018 - Jan 2019*
- Facilitated stock organisation alongside 4-5 colleagues
- Responsible for aiding dozens of customers on a daily basis
- Gained insight on management in regards to marketing and sales

Research EPQ on Matter-Antimatter Imbalance (Researcher and Writer) *Spring 2018*
- Independantly conducted report analysis and research on early universe particle interactions
- Developed conclusions based on recent experimental evidence
- Presented report to a large ($\sim$ 200 people) audience at the YSJ Conference 2018

SKILLS

- Tableau, spreadsheet software, basic HTML, shellscript, MATLAB, Python 3, awk, sed, and LaTeX
- Version control using git
- Numerical modeling (such as via the RK4 or Metropolis-Hastings method)