

# RUFUS BEHR

r.behr.20@abdn.ac.uk  $\diamond$  <https://sufurelite.github.io>

## EDUCATION

---

### University of Aberdeen

2020-23

BSc (Hons) in Computing Science & Mathematics

NA Merit Scholarship '20,

Expected Degree Class: First Class Honours

Chancellor's List '21

(Ongoing) Thesis supervised by Dr. Ehud Reiter: Author Styled Text

Top Classics Awards '22

Generation in Latin fine-tuning Transformers and Large Language Models

Relevant Coursework: Languages and Computability, Artificial Intelligence, Algorithmic Problem Solving, Intro to Data Management for Data Science, Linear Algebra I-II, Analysis I-IV, Complex Analysis, Mathematical Modelling, & Differential Equations

Activities: Bridge Club Secretary '21, '22

### Fordham Preparatory School

2014-18

High School Diploma

Received Two Classwide Awards: The School's First Recipient of Excellence in both Latin and Ancient Greek, & Excellence in Fordham University Coursework for my success in CISC 3060: Introduction to Robotics

## RESEARCH

---

### Quadrat Interdisciplinary Research Internship

June 2022 - Present

*Undergraduate Research Intern*

*Remote*

- Worked on applying Machine Learning to reduce localization errors for automated radiotelemetry systems to track animals in Colombia, the results of which are being prepared for publication
- Using Python (PyTorch, Scikit, NumPy) I improved the initial multilateration error from over 150m to 60m

### Rensselaer Polytechnic Institute <https://devpost.com/software/ivyhacks>

Sep. 2019 - Dec. 2019

*Undergraduate Researcher, for credit*

*Troy, NY*

- Started Undergraduate Research Project, 'Aleph Naught', which aimed to simulate the playing style of a chess player given their historical games
- Culminated in a Proof of Concept that won 'Best Implementation and Potential for Growth' at IvyHacks, an online Hackathon co-hosted by Ivy League universities with 1500+ participants, in Oct. 2020.
- Built the Frontend in Vue.JS, and both the model, a Binary Classifier that determines how likely a position would be played, and the Backend were written in Python using TensorFlow, NumPy, Scikit, and Flask.

## EXPERIENCE

---

### Goldman Sachs

June 2022 - Aug 2022

*Full Stack Summer Analyst*

*London, UK*

- Worked on an internal web app, following a scrum methodology using Jira
- Created components for the front end in Typescript and React with 100% test coverage in Jest
- Wrote the back end in Java using Springboot, deployed on AWS ECS Fargate, and rewrote the same functionality in Python, on AWS Lambda

### ReSource Pro

Jun. 2018 - Dec. 2020

*Data Science Intern, paid*

*Qingdao, China & Remote*

- Researched and applied machine learning models to Insurance Documents to automate laborious processes
- Developed three key models: one that can discern the type of insurance document provided currently used on thousands of documents daily, one that could determine the type of Acord Document File, and a proof of concept joint Part-Of-Speech Tagger and Neural Network Dependency Parser to generate Insurance Policy Document Summaries

## COMPETITIONS

---

- eraCe (Competition)** <https://devpost.com/software/erace> Oct. 2021  
*HackHarvard 2021* Remote
- Won 2nd Best Overall Hack
  - Created a mobile application that tackles racial discrimination in the hiring process by allowing job seekers to apply more anonymously and equitably
  - Developed the Frontend in React Native and the Backend in Python
- Chadvice (Competition)** <https://devpost.com/software/chadvice> Apr. 2021 - Jun. 2021  
*Sentiment & Opinion Mining Natural Language API Hackathon* Remote
- Created an Android Application that, utilising Natural Language Processing and Machine Learning, provides analysis of your dating app conversations in real-time, gauging their interest and the likelihood of getting ghosted
  - Developed the Frontend in Java and the Backend in Python, hosted on Google Cloud
- SaVaX (Competition)** <https://devpost.com/software/savax> Jan. 2021  
*University of Cambridge's Hex Cambridge* Remote
- Won People's Choice Award and the Wolfram Award
  - Developed an App that addresses COVID-19 vaccine wastage using Vue.JS, MongoDB, and Google Maps API
- Coronadvisor (Competition)** <https://devpost.com/software/coronadvisor> Mar. 2020  
*Caltech's HackTech* Remote
- Won Best COVID-19 Awareness & Prevention Hack and Best Use of Google Cloud
  - Trained an Artificial Neural Network and XGBoost Regressor, based on our engineered daily data from Johns Hopkins, to predict confirmed cases and deaths in given regions due to COVID 1 year into the future, visualised on Esri
  - Used Pandas, Scikit, TensorFlow, Flask, arcGis, Google Maps Geolocation API, HTML, CSS, and JavaScript
- Check It (Competition)** <https://devpost.com/software/bigredhacks-jayhes> Oct. 2018  
*Cornell's Big Red Hacks* Ithaca, NY
- Won Best Technical Feat
  - Built a plagiarism detector that analyses the writing style of a new essay and compares it to the writing style of the student that submitted it
  - Built the Frontend as a C# WPF Application and applied NLP methodology in Python to create the model
- Google Code-In (Open Source Project)** Nov. 2016 - Jan. 2017  
*International Competition hosted by Google* Remote
- Placed 8th internationally in 2016
  - Developed scripts for a chatbot, procedural world generation, and other in-game modifications for an open source Java based version of Minecraft, called Terasology, for the organization Moving Blocks
- Unite for Humanity Hackathon (Competition)** Apr. 2016  
*Hosted by the United Nations* NY, NY
- Won First Place
  - Developed the Frontend for a platform, called Counteract, to detect and mitigate threatening behavior on social media
- Parkinson's Artificial Intelligence Diagnosis (Competition)** Apr. 2016  
*Penn State App Competition* State College, PA
- Placed 3rd out of 185 teams

- Created an iOS application to diagnose Parkinson's disease based on audio features with an accuracy of 94% using TensorFlow, FLASK, and Swift

## SKILLS AND ABILITIES

---

<b>Proficient In</b>	C++, C#, Java, Python, SQL, JavaScript (React & Vue.JS)
<b>Other Languages Studied</b>	Ancient Greek, Latin, Old English, Sindarin, & Mandarin
<b>Extra-Curricular</b>	Machine Learning Reading Group & Bridge Player for Scotland Juniors Team