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Kieran Didi

EDUCATION

MPhil Computational Biology, Cambridge University, St. John's College 10/2022 – 2023
Lectures include deep learning, genomics, systems biology

M.Sc. Biochemistry, Ruprecht-Karls-University Heidelberg 10/2021 – 10/2022
Focus CS, lectures incl, ML I+II, OS&networks, software engineering,
MD simulations

Cambridge University, St. John's College (scholarship exchange year) 09/2020 – 10/2021
Natural Sciences Part II, lectures e.g. math. methods, symmetry,
cheminformatics

B.Sc. Biochemistry, Ruprecht-Karls-University Heidelberg 10/2018 – 10/2021
Grade 1.0 (highest grade of 73 students), additional lectures in
macroeconomics, econometrics, business and statistical learning

WORK EXPERIENCE

CSIRO Sydney, team Translational Bioinformatics Sydney, Australia
Software Engineering Intern (Cloud-native genomics) 07/2022 – 10/2022
- Develop cloud-native Python software for omics analysis,
  application in genome engineering and biosecurity
- Use Spark, AWS and Terraform to facilitate scaling and reproducibility

PTNG Consulting Melbourne, Australia
Consultant for ML/bioinformatics projects 06/2022 – present
- Deliver and communicate insights via literature research/ML and
  bioinformatics analysis
- Example topics: protein design and structural analysis of antibodies

Chemistry Department, Cambridge University Cambridge, UK
Thesis Student, Bernardes/Knowles/Sormanni Lab 09/2020 – 10/2021
- Designed peptide therapeutics and developed screening system
  (publication in peer review, preprint:
  https://www.biorxiv.org/content/10.1101/2020.06.04.132308v4)
- Enabled improved classification results by building large-scale
  database for high-quality antibody sequences, incl. data quality
  control and annotation
- Developed ML models and processing pipeline to quantify
  nativeness of antibody sequences (PyTorch)

BioMed X Innovation Center (with Janssen Pharmaceuticals) Heidelberg, Germany
Research Intern 08/2019 – 04/2020
- Established a screening system for autoimmune diseases for
  multi-national pharmaceutical company, throughput
  improvements (>100x more samples in same time) enabling
  personalized patient screens
- Developed and presented novel approach to BioMedX
  founder, board members and staff (50)

SKILLS

Machine Learning: PyTorch and TensorFlow, used in research placements and summer school projects
Cloud Computing: AWS, Terraform for Infrastructure-as-code
Web Development: HTML/CSS (incl. Bootstrap, Flexbox, Grid), Javascript, Node.js
Programming: Python, R, Java, C++ (prior experience)
Teaching: Conceptualized and held undergraduate lectures on data science with Python, including numpy, pandas, matplotlib and seaborn. Offered tutoring for maths/chemistry/biochemistry
Online Coursework: Algorithms I+II (Princeton), Deep Learning (Andrew Ng), ML with Graphs (Stanford)
Deep Learning Summer Schools: OxML, EEML, SMLW, DLAI6, Deep Learning for Medical Imaging

CERTIFICATES

- 2022: Nvidia: Fundamentals of Deep Learning with Multiple GPUs
- 2022: Web Development BootCamp TechLabs (6 months)
- 2021: Cambridge i-Teams certificate for consulting project at biotech startup (ADC technology)
- 2019: Data Science BootCamp TechLabs (6 months)
- 2019: Heidelberg University: Innovation in Small and Big Companies
- 2019: Heidelberg University: Fundamentals in Business

LEADERSHIP AND AWARDS

- 2022: Scholarship from both DAAD and Studienstiftung for master's studies at Cambridge (30k €)
- 2021: Sartorius scholarship for master's studies at Heidelberg for academic performance (20k €)
- 2021: Awarded the Marsilius Certificate for statistical learning: Econometric predictions via LSTMs
- 2020: Scholarship for exchange year at Cambridge University (20k €)
- 2019: Selected as one of 250 participants for a 6-month coding program in Data Science (Python), awarded the Digital Shaper Award for project (water quality predictions)
- 2018: Scholarship of German Academic Foundation based on intellectual ability
- 2018: Biology Olympiad, 2nd place in Germany (>2,000 participants), silver medal at the International Competition in Tehran (best 30% of global selection of talents)

VOLUNTARY EXPERIENCE

German Biology Olympiad Association   Kiel, Germany
Steering committee   05/2019 – Present
- Co-ordinated selections rounds: Coached 45 participants/year
- Enabled selected participants each year exposure to leading researchers via internships at prestigious institutions (e.g. Max Planck Institute), launched new formats (e.g. participation in summer schools)

Student parliament Heidelberg   Heidelberg, Germany
Conference administration   11/2018 – 09/2020
- Designed, chaired and summarized biweekly debates (30-page report per debate)
- Reduced debating time by >1 hour/debate by implementing new efficient working procedures

INTERESTS

- Handball player, 3x state championship winners, first local team to reach nationwide league
- Authored a fantasy book about a teenager able to stop the time (220 pages)
- Published opinions and reports (10) in newspapers (e.g. Kölner Stadt-Anzeiger)
- Science communication at preLights, publishing explanations of new "ML for biology" preprints
- Enthusiastic guitar player for 12 years, teamed up with drummer for cover songs