

# Kevin Chan

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 GitHub Profile  
 LinkedIn Profile

## EDUCATION

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- **PhD in Astrophysics** 09/2019-current  
*Research in protoplanetary discs.* QMUL (Queen Mary University of London)
  - Advanced a modification of FARGO3D hydrocode to simulate protoplanetary discs on high performance computing systems.
  - Data analysis and data visualisation using Matplotlib, SciPy and NumPy libraries in Python on Jupyter Notebooks.
  - Achieved publication of LaTeX formatted papers on MNRAS (Monthly Notices of Royal Astronomical Society).
- **MSci Astrophysics** 09/2014-07/2018  
*Graduated First Class Honours.* QMUL
  - Developed a first order ODE solver in Python using Spyder IDE simulating gap formation of a protoplanetary disc.
  - Stayed up to date in technology for detecting black holes, producing an academic review paper of current observations and techniques.
  - Relevant modules: Introduction to Scientific Computing, Introduction to C++ Programming, Mathematical Techniques.

## PUBLICATIONS AND AWARDS

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- **Technical Excellence Award** 10/2023  
*Voted for excellent coding practices.* BNTA (Bright Network Technology Academy)
- **Stability of a Dusty Ring in a Planet Embedded Protoplanetary Disc** in prep.  
*Kevin Chan, Sijme-Jan Paardekooper.* MNRAS
- **Single fluid versus Multifluid** 09/2022  
*Chan & Paardekooper (2022).* MNRAS

## CODING EXPERIENCE

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- **Hack For Change** 10/2023-11/2023  
*AI to reimagine the work-place as a completely inclusive environment.* Bright Network (remote)
  - Two week hackathon developing an application using AI in the workplace to improve inclusivity and diversity in a team of six.
  - Developed a mental health app to tackle workplace stress using React Native and Spring Boot, integrating OpenAI to provide a safe chatbot.
  - Won the People's Champion Vote from an audience of 160 people, sharing a part of the prize pool.
- **Capstone Project** 09/2023-10/2023  
*A react based dynamic routing application to increase efficiency of deliveries.* BNTA
  - Using MapBox GL JS and Mapbox Directions API, created a full stack dynamic routing application in Vite React.
  - Improved the efficiency of deliveries for a fictional company that was in the process of digitising.
  - Created an Agile environment in a team of five over two weeks with a research sprint, daily stand ups and weekly retrospectives.
- **Front End Project** 08/2023-09/2023  
*Webpage utilising a restaurant recommendation API.* BNTA
  - Designed and coded a front end web page for a restaurant recommendation API, using React library as a group of five, with mobbing and paired programming.
  - Effectively integrated HTML image maps to design a filter by London boroughs.
- **Back End Project** 07/2023-08/2023  
*A spring boot backend server for a bookshelf API.* BNTA
  - Programmed a bookshelf API with Spring Boot in Java and PostgreSQL for database management, taking inspiration from Goodreads.
  - Accomplished a REST API with full CRUD functionality that supported a different group's front end project.

## WORKING EXPERIENCE

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- **Professional Skills for Scientists Demonstrator** 03/2022-07/2022  
QMUL
  - As a team of demonstrators, assisted undergraduates with weekly coding lab assignments, enhancing their skills in Python.
  - Offered valuable support in terms of job opportunities by guidance in developing their essay writing, research, and communication skills.
- **Introduction to Scientific Computing Demonstrator** 10/2020-07/2021  
QMUL
  - Resolved technical coding issues that undergraduates had when tackling Python programming in a scientific background.
  - Rectified existing course code, improving quality of the module and delivering constructive feedback to the module organiser.
- **Stars Module Demonstrator** 03/2019-07/2019  
QMUL
  - Managed a class of undergraduates for weekly exercises classes for an astrophysics module.
  - Problem solved and presented solutions on the whiteboard, solving scientific queries and questions.
  - Marked coursework from undergraduates and provided feedback to the group and 1:1.
- **Physics and Maths Tutor** 09/2018-05/2022  
London
  - Planned KS2- A level material, providing 1:1 tutoring sessions remotely and in person.
  - Generated a network of ten tutees from use of social media and successfully achieved target grades by students and parents.
  - Improved communication in explanations of maths and physics across all ages.
- **Customer Assistant** 06/2012-06/2017  
Tesco Extra, London
  - Provided training sessions to internal staff on products and customer service.
  - Solved customer queries and requests across different departments.
  - Adapted to different roles when needed in the store, including security, stock management, front tills and kiosk.

## KEY CONFERENCES AND WORKSHOPS

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- **Protostars and Planets VII** 04/2023-05/2023  
Kyoto, Japan
  - Enriched scientific knowledge through attending the largest conference for formation of stars and planets.
  - Maintained network in astrophysics field and generated collaboration ideas.
- **Dustbusters Workshop** 05/2022  
Gargnano, Italy
  - Engaged in a week-long series of lectures and evening workshop, learning different areas of astrophysics.
  - Mentored a team of three on the use of a hydrocode resulting in presentations of post processed data from telescopes to an audience of 50 PhD students and professors.
- **London Exoplanet Day** 12/2021  
University College London, London
  - Created new network of astrophysicists from different universities.
  - First presentation of preliminary results to external members including PhD students, lecturers and professors.
  - Generated interest in the scientific topic and further discussions.

## TECHNICAL SKILLS AND INTERESTS

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**Languages:** C/C++, Python, Java, Javascript, HTML, CSS, LaTeX

**Libraries :** ReactJs, NodeJs, SciPy, NumPy, Matplotlib

**Web Dev Tools:** Git, Github, Trello, Excalidraw

**Frameworks:** React Native, Spring Boot

**Databases:** PostgreSQL

**Hard Skills:** Computational Astrophysics, Numerical Methods, Data Analysis, Publication, Algorithms, Software Development, Mathematics and Physics

**Soft Skills:** Problem Solving, Adaptability, Collaboration, Communication, Leadership, Time Management, Networking, Presenting, Teaching, Assessment and Evaluation

**Hobbies:** Boulderling, Coding Challenges, Piano, Chess, Pub