What is PostAc®?

The matching between higher degree research graduates and their potential non-academic employers is poor.

Many research graduates have little awareness or understanding of the non-academic employment landscape, and are often ill-prepared for its demands.

Meanwhile, few non-academic employers recognise the skills, capacities and opportunities research graduates offer. In fact, most employers omit higher degree terms like 'Masters' and 'PhD' in online job advertisements.

This means that when job seeking, research graduates accessing traditional job search engines tend to see only academic jobs and make the assumption that there are no suitable non-academic jobs for them to apply for.

This gap prompted the foundation of PostAc®.

PostAc® is a unique job search engine made for researchers by researchers.

PostAc® (derived from 'Post Academia') uses artificial intelligence, machine learning, pattern recognition and data mining to find the research intensive 'needles' in the job market 'haystack'.

The PostAc® algorithm can 'read' millions of job advertisements and rank them based on research skills intensity, indicating which jobs require the high-level research skills possessed by research graduates. These jobs are then presented in

search results on the PostAc® web platform with a unique 'nerdiness rating' (Fig 1: Search results for the search term 'fantasy fiction telling stories womens advocacy').

PostAc® helps research graduates navigate their pathways beyond academia. It shows them the sorts of jobs available outside academia, where these jobs are located, and what other skills these types of jobs are asking for (Fig 2: Screen shot of skills bubbles generated within each job card).
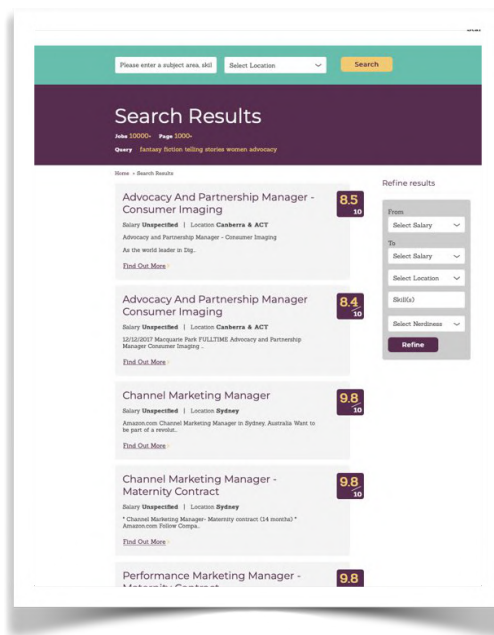
How is PostAc® different from other job boards?

PostAc® is focused on a unique problem – matching highly valued, research oriented problem solvers with potential users of their skills outside academia. At present, research graduates have little understanding of the potential market for their research skills outside academia, and non-academic employers seeking high value researchers and problem solvers have difficulty accessing these graduates.

PostAc® solves this problem by using artificial intelligence to analyse and filter millions of job advertisements to show what's right for each user. Even graduates working on esoteric research problems – such as 'Narrative Structure in Game of Thrones Novels' or 'Studies of Effective Environmental Activism' – can find jobs drawing on their expertise.

PostAc® has machine learning enhanced search capabilities, so researchers can use more specific, specialist language when looking for jobs.
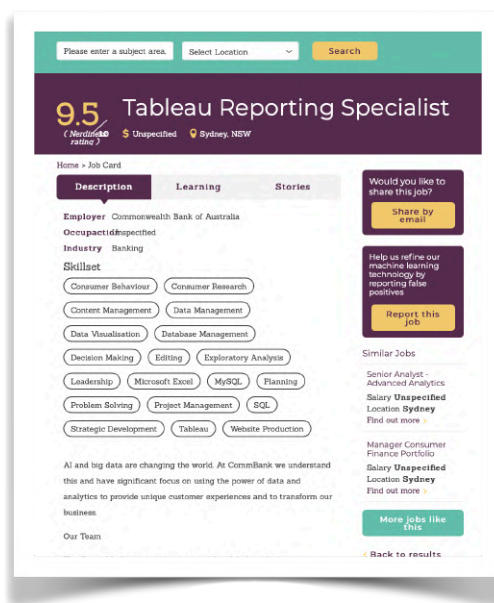
Is there customer demand for PostAc®?

Prior to the launch of PostAc® in April 2022, over 1300 PhD students tested the beta version of the web platform, and this feedback was used to improve both the research skills intensity job ranking algorithm and the user interface.

The decision was made to launch first in Australia and New Zealand, and PostAc® has had a number of small, medium and larger universities subscribed to the platform. PostAc® currently has over 4300 individual users, and we've received enquiries from universities in other jurisdictions (e.g., United Kingdom) asking when PostAc® will be available in their market. We have also received interest from other tertiary institutions (i.e., non-universities) looking to provide more employability training/education for their students.

In reverse, a range of employers have asked us for ways to more directly access, advertise to and potentially employ the high value researchers/users of our platform.

How does PostAc® work?

PostAc® is a job searching web platform powered by machine learning technology, custom designed for use by early career researchers and research graduates. It shows users a range of jobs that might suit their research skills. Job board advertisement data is licensed from a third party provider.

The web platform is hosted by Amazon Web Servers (AWS) (i.e., the account of the service is a PostAc® instance on AWS), with job advertisement search functionalities enabled by Elastic Cloud (i.e., Elastic Search). A backup copy of the PostAc® instance of AWS and regular updates are stored on a server securely located at ANU. This server receives regular job advertisement data updates (new jobs listed, old jobs expired), which are processed by our unique algorithm. The 'read' and 'ranks' job advertisements are then uploaded to Elastic Cloud, i.e., job data is present in our ANU server and Elastic Cloud server only, while user data is only present in AWS server.

Users only interact with the web platform (which is secured via HTTPS) and the web platform does not require integration with any existing systems or infrastructure of our subscribers.

Our data partner

PostAc draws on job advertisement data provided by Lightcast.io – the global leader in labour market analytics.

Current PostAc® revenue streams

Current PostAc® revenue is based on two streams.

Subscriptions

Currently, our key source of revenue is subscriptions, taken out at the institution level. Institutions (universities) subscribe to PostAc® (under a Software as a Service Agreement), and then any individual who holds a valid, active email address from that institutions' domain is able to set up a user account and use the platform. This means that all staff, students and alumni of the institution have access, with no cap on the number of users. Subscriptions are priced differentially for small, medium and large-sized universities.

Landscape reporting

We have also used the data underpinning the PostAc® platform to generate specific labour market reports for both government and university clients.

Potential PostAc® revenue streams

A range of other potential PostAc® revenue streams exist. These include:

Expanding into new jurisdictions

We have explored pathways to deploy PostAc® in other countries, with the UK, US and Canada the most obvious next targets.

Testimonials for PostAc®

"A fresh vision about our job choices" (Sociology, PhD)

"Love PostAc! A positive approach to non-academic jobs" (Sociology, PhD)

"There are a lot of possibilities out there and there are concrete steps we can use to get where we want to be" (Chemistry, PhD)

"Built my confidence to find jobs outside academia" (Physics, PhD)

"Now I know what is beyond academia" (Sociology, PhD)

"Very useful to identify the pros and cons of various non-academic jobs" (Biology, PhD)

"This is an amazing job search site!" (Biology, PhD)

"A fresh vision about our job choices" (Sociology, PhD).

Advertising

We have been approached by education focused organisations (in particular those offering skills-based short-courses) seeking to place advertisements on our platform.

Preferential job ads

We have been approached by companies interested in having their job advertisements given preferential placement on our platform, similar to a Google Search Ads model.

Additional subscription model

We have explored the possibility of an individual user subscription model, in particular for research graduates and early career researchers no longer affiliated with a university but still interested in the PostAc® service.

Build talent pipelines

We have explored the option of building a portal enabling employers/recruitment agencies to connect directly with our Users.

IP status of PostAc®

All IP associated with the PostAc® product/service is solely owned by ANU.

The PostAc® word and logo is trademark registered in Australia, Europe and the United States (for classes 09, 35, 41 and 42), and ANU has several registered domains for the PostAc® service as well.

Opportunity to obtain IP rights to PostAc®

The Office of Research & Innovation Services at ANU is responsible for licensing technologies developed at the University. If you are interested in learning more about the PostAc® technology and the current licensing opportunity please contact us. We are happy to answer any questions you may have and provide you with any additional information you may need.

We are looking for a

licensee who is committed to expanding PostAc's® reach and impact, and who has the financial and technical resources to do so. As a licensee, you will have access to our technology, intellectual property, and expertise, and will be able to build on our existing platform to create an even more comprehensive solution for research graduates and early career researchers. We believe that PostAc® has the potential to transform the postgraduate research landscape, and we are excited to find a partner who shares our vision and can help us bring it to life.

Other benefits/impacts of PostAc®

Alongside the direct benefits PostAc® provides to end users, we also offer a range of other insights and services to our university and government clients.

Deep data analysis

Our analysis provides a unique way to explore the labour market for research skills. With our data it is possible for **universities** to provide better career directions and outcomes for students and plan future programs, and for **governments** to explore the demand for an innovation focused workforce.

Supervisors

PostAc® can help research supervisors find jobs suitable for the graduates of their programs and give prospective candidates better advice on how to spend their professional development time.

The wider PostAc® team, including Will Grant, Lindsay Hogan, Hanna Suominen, Inger Mewburn, Chirath Hettiarachchi, Chenchen Xu and Ran Cui.

PostAc

Program conveners

PostAc® also helps program conveners to better shape their PhD program offerings to fit the needs of a changing job market; a similar development process can also assist program conveners at other qualification levels in specific disciplinary domains.

Industry connections

Universities are often asked to foster better connections with industry partners. Our PostAc® algorithm shows where research intensive jobs are located, and who is working on research-oriented projects near university campuses.

Key research team (founders)

Professor Inger Mewburn

Inger is the Director of Research Training at ANU. Her team provides professional development opportunities for researchers across the university. Inger has specialised in the study of research education and research student support since 2006, with particular interests in research student experience, PhD graduate employability, as well as social media and blogging.

Professor Hanna Suominen

Hanna is a Professor of Computer Science (CS) at ANU and is at the forefront of accelerating health impact from precision medicine technology, through the application of advanced analytics and Machine Learning (ML). She is the Associate Director (Engagement & Impact) of the ANU School of Computing and the Executive Leader (Computing and Engineering) of Our Health in Our Hands (OHIOH), the inaugural ANU Grand Challenge Program.

Associate Professor Will Grant

Will is Associate Professor in Science Communication at the Australian National Centre for the Public Awareness of Science at ANU. Will's research and writing has focused on the intersection of society, politics and science, and how the relationships between these are changing with new technologies. Will's areas of expertise include science communication, research, political theory and philosophy, and social media/social network analysis.

Chenchen Xu

Chenchen is a Phd candidate in Machine Learning and Vision Language at the ANU School of Computing.

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