



Professor Adrian Sheppard

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CTLAB

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THE AUSTRALIAN NATIONAL UNIVERSITY

ACTON ACT 2601

Job Application for Software Engineer

Dear Prof. Adrian,

I really appreciate the valuable opportunity of applying for the role of Software Engineer with your lab, which I came across on the ANU Jobs website. After reading the job description, I considered myself highly suitable for the job, with the desirable skill set to meet performance expectations.

About Me

I believe very strongly in what I can deliver. I have just graduated with Honours in March from the Australian National University, with a double degree in Advanced Computing (Honours) and Science. In it, I specialized in Intelligent Systems and Advanced Mathematics. My honours project was about heuristics for probabilistic planning, the algorithms were implemented in C++, and I received a High Distinction for my Honours project with thesis. From my studies, I would confidently say that I am a highly capable and quality-orientated Software Engineer, and a great problem solver. Among my skills, I have developed an excellent understanding of a wide range of programming languages and tools and have used them to create high-quality products. I am a fast learner, and I always love learning new technologies.

When I saw the job description on the website, I feel like it was designed for me. I have always wanted to develop modern software for researchers. When I developed the data analysis software to perform analysis and to create research standard graphics for paleo-ecology researches with Dr. Rebecca from College of Asia and the Pacific, I saw how my software helped boost the efficiency on research. Also, I truly saw how they suffered from outdated software. This happened when we pitched the project on the AQUA conference: other researchers were so excited to see how this could help them get the same result without doing anything complicated in excel or having to code. When I pitched the idea to Mrs Fisher from the digitization department of CSIRO, I saw how we can use computer vision to develop a modern workflow to relieve repetitive tasks, which currently depends on human labour and microscopes to digitize huge collections. Even though they were not able to offer me a contract due to administrative reasons, I still managed to perform a successful presentation about auto-extraction of fruit fly wing measurements using computer vision with a shutter click.

For this particular role, my skill set is just right for the job. I have done projects related to analysis and visualization many times with multi-dimensional complicated datasets. For the paleo-ecology project, I studied more than 30 papers in order to perform the analysis and finally present the results in accordance to academic standards, all independently. My solid programming skills in Python and bash were keys to my success. For software engineering, I have had plenty of practice in development and management methods from multiple projects, from small scale teams or larger teams from my time in HPE. As for research skills, I have my successful honours research to quote. And lastly, my knowledge about mathematics will prove to be useful for physics labs. I have worked for many clients before, and I also have good interpersonal skills to communicate with teammates or supervisors and clients efficiently.

I hope you find me, upon appraising my resume, to be a competent candidate with the right personality for the job. I believe myself to be conscientious, tenacious and passionate, and able to create high value to your group.

Thank you for taking the time to review my materials. Please do not hesitate to contact me if there is anything else you might need. I look forward to hearing from you soon.

Selection Criteria Responses

- 1. I have a double degree in Advanced Computing and Science. Because of this combination, I am comfortable with both programming tasks, and understanding the necessary physics that goes into the research. I also have the relevant experience developing software for scientific use, for paleo-ecologists and biologists, in which I performed complicated data analysis and visualization, as well as image recognition.
- 2. I have very solid programming skills in python and bash, and I'm also competent in C++ and JavaScript. I am also skilled in using git, docker, and other devops tools.
- 3. I am familiar with developing in Windows, Ubuntu, Fedora and Mac operating systems, for software development or analysis tasks.
- 4. I am familiar with modern software development processes, and I have gained a good reputation in communicating with client and fulfilling their demands.
- 5. For the paleo-ecologist project, I took charge of implementing the data analysis software, alongside successfully conducting my honours research myself. My good time management skills and strong motivation supported my success. When I interned in HPE, I help to maintaining other people's code every day. Finally, when I develop software for other subjects, my fast-learning skills ensure that I understand the project and that I always deliver on time.
- 6. I am always recognised for my excellent contribution to the task in team efforts. The main reason is that I am passionate about the work and have creative ideas that help our overall success. Furthermore, in my tutoring, my students always find me very supportive and helpful.
- 7. I have always practiced the equal opportunity principles and policies and have been committed to applying them.

I am currently holding a student visa, however, I am applying for a 485 visa, and I am expected to received it in early April. Right now, I have full-time full working rights as well.

Sincerely,

Zibo Wang

Attached: Curriculum Vitae