

Research Software Engineering Team
Newcsatle University

16th October, 2025

Dear members of the search committee,

I am excited to attach my applicaiton for the role of research software engineer. I have eight years of experience computationally cleaning processing and modelling data for multiple research and voluntary client projects. I have used statistical analysis, including linear regression and generalised additive mixed models and I have a current project underway using random forest models for accent classification via sound data. I have enjoyed applying my data analysis skills and programming skills to alternative data sets in a voluntary capacity such as a congregational survey for a church trust, a marketing survey for a school start-up project, and a video platform user survey. I have recently undertaken independent Python training to broaden my skill set and have applied this in practice, collaboratively developing data cleaning and import scripts for a Django web app. I have used GitHub for version control individually and in a team in research and other contexts, and for issue tracking for a website programming group. I have a self-motivated approach, and a can-do attitude to problem solving and professional development, having self-taught the skills for much of my PhD and subsequent work, including transitioning those skills to uses outside of academia.

My current Research Associate (Linguistics Lab Manager) role has a significant component that is similar to an embedded research software engineer role. I have undertaken individual and team consultations with researchers across more than three academic departments, advising on software, experiment design, and statistical approaches, including those outside of my own research specialisms and specific experience. I have experience scoping research costs for both my own research and for lab funding. I would be excited to extend and develop these skills outside of language data and research.

I have extensive undergraduate and postgraduate teaching experience. Additionally, I have developed my own materials for researcher training in specific statistical techniques. I have trained and supervised undergraduate research assistants in command line programmes and domain specific software, gaining a wide experience of communicating technical concepts to those with little to no previous training. I have also presented technical information at a variety of levels of experience, from external stakeholders to experienced academics. These skills and experiences combined equip me to present work at project meetings and events, provide training to team members and researchers, and contribute to internal learning and development. I have represented both institutions that I have worked at nationally and internationally. I am experienced at public speaking to both specialists and external stakeholders.

In all my work I strive for excellence, seeking out opportunities to learn and develop my skills and ensure I am using the most up to date and appropriate analysis techniques for each project. I have regularly worked in either multiple jobs or jobs that contain more than one project or commitment. I am able to balance long-term objectives with shorter term deadlines. I have planned and executed work to others' deadlines and set mine independently as required by the various projects I have worked on.

I strive to create and participate in a supportive and collaborative working environment, even when colleagues are working on separate projects. In both my professional and volunteering experience, I have collaborated with teams to understand project goals and the appropriate ways to share those within a team. My lab manager role in 2022 was a shared post where two staff and our lab director worked together to achieve the goals set by the departments invested in the lab. I have planned and executed work to others' deadlines and set mine independently as required by the various projects I have worked on.

I am excited by this opportunity to bring my skills from the computational and analytical stages of research into the research software engineering environment. This role would continue to expand my experience from working within the multiple subfields of Linguistics to working with colleagues from multiple research areas. I am particularly attracted to the opportunities to both develop my own skills and work with and complement teams of researchers.

Yours sincerely,

Caitlin Halfacre