

Jessica Elliott

SOFTWARE ENGINEER • LINGUIST • AUDIO ENGINEER

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Work Experience

Software Engineering

PathCare

FRONTEND DEVELOPER

- Worked as a core developer on a main project
- Improved processes by introducing a code review tool, making code reviews more efficient

Cape Town

April 2023 - February 2025

LANGUAGES AND SKILLS

Angular, Typescript/javascript, CSS, CouchDB, Jenkins, JetBrains Space

Sozo Labs

FULL STACK DEVELOPER

- Improved existing system: web front-end in Angular and app backend in C# Xamarin; streamlining code, bug fixes, and adding features
- Was instrumental in moving the system onto AWS; wrote documentation on best practices for setting up in AWS and made use of Cloud Formation
- Set up a user sign-up system with Amazon Cognito which made use of Amazon SES and AWS Lambda

Cape Town

Apr-Sep 2021

LANGUAGES AND SKILLS

Angular, React, Typescript, C#, Xamarin, .NET, AWS Cloud Formation, AWS Lambda, Amazon Cognito, MySQL, Docker, Bitbucket

Amazon Web Services

SOFTWARE DEVELOPMENT ENGINEER

Cape Town

Aug 2016 - Sep 2019

- Took the lead for my team's contribution to add a new API to the EC2 services (send-diagnostic-interrupt). This involved high level project design around a micro-service architecture, and coordinating with other teams in Cape Town and Seattle.
- Participated in an operational support rotation which involved: responding to critical issues; server maintenance; co-ordinating daily integration, testing, and deployment of the service; and using a monitoring system built on Grafana to analyse metrics.
- Demonstrated Attention to detail: The products worked on have a lot of working parts, and any new piece of code could have unintended consequences. A keen eye for detail helps to avoid this, or find existing problems in old pieces of code. This was one of my strongest areas.

LANGUAGES AND SKILLS

Java, Ruby, AWS, system administration and DNS management, Java design patterns, integration testing, CI/CD, Agile workflows and project management, git, teamwork across locations and time zones

Amazon Web Services

SOFTWARE DEVELOPMENT ENGINEER INTERN

Cape Town

Feb-March 2013 and Dec-Jan 2014-2015

- Added a page to a server monitoring website built on Ruby on Rails, enabling users to schedule maintenance on servers.
- Contributed to an in-house reporting tool in Ruby, and got a service onboarded to the tool using Yaml.

LANGUAGES AND SKILLS

Ruby on Rails, YAML, Git, unit testing and test-driven development

Rhodes University Computer Science Department

Grahamstown

GRADUATE ASSISTANT

Jan 2012 - Dec 2015

- Tutored and coached undergraduate Computer Science students in a variety of programming languages (Java, C#, C++, Haskell, MIPS, and others)
- Reviewed and marked undergraduate Computer Science student assignments

LANGUAGES AND SKILLS

Reviewing code in unfamiliar programming languages; giving feedback to and mentoring less experienced coders; time management

Web Molecule

Cape Town

JUNIOR WEB DEVELOPER

Feb 2013 - Mar 2013

- Web development on a Content Management System for a town newspaper, working with frontend technologies.

LANGUAGES AND SKILLS

PHP, MySQL, Javascript, CSS

Music/Audio

SKILLS

Audio engineering for live bands, solo artists, speakers, and plays. Event and venue management. PA system setup.

National Arts Festival

Grahamstown

SOUND TECHNICIAN

- Venue management and sound engineering for the solo artist music venue, Graham Hotel, during the 11 days of the festival.

Rhodes Live Music Society

Grahamstown

SOUND ENGINEER

- Setting up and engineering sound system equipment for live music events organised by the society.

Various churches

SOUND ENGINEER - VOLUNTEER

2012-2018

- Set up and engineering the sound system for church services, various small churches. This involves sound for musicians as well as preachers and other speakers.

Linguistics

National English Literary Museum

Grahamstown

DATA CAPTURE

2012

- Gathering data from online news articles to build a corpus of South African English from 2011, using a sampling frame from the BE06 corpus of British English.

Rhodes University Department of Linguistics

Grahamstown

PROGRAMMER

- Used the E-Prime Psychology Software Tool to create a reaction-test (using a hardware device for accurate reaction timing) for a language researcher from the Linguistics department to use in her research.

Teaching & Tutoring

Rhodes University Computer Science Department

Grahamstown

GRADUATE ASSISTANT (TUTOR)

2012 – 2014

- Tutoring groups of undergraduates (from first through third year) in Computer Science. It required being available for students in a support capacity, and included marking and, as part of that, managing mark-sheets.

Private

Grahamstown

PRIVATE TUTOR

Jan – July 2014

- Teaching the Information Technology curriculum to a pair of grade 11 pupils taking IT as an extra subject.

Private

Grahamstown

PLAY THERAPY

July 2009 – July 2010

- One-on-one play therapy with 2-3 year old autistic child.

Projects

Flip Programming Competition

ASSISTANT DEVELOPER

- Assisted in the design and development of a game and web front-end for a programming competition, to encourage students to program for fun. The server for the website was set up using Python and Pyramid.

LANGUAGES AND SKILLS

Python, frontend web design (with HTML5, CSS, Javascript)

Self-hosted Mailserver

PERSONAL PROJECT

- Bought a domain and server space, set up the DNS in Digital Ocean, and built a custom mailserver initially from scratch to learn the details of how a mailserver works, and then using Mailu and Docker.

LANGUAGES AND SKILLS

Mail components (Dovecot, Postfix, certificate management), Docker, system administration, DNS management

Honors & Awards

2009	Finalist , Standard Bank IT Challenge	Rhodes University
2012	Second place , ACM ICPC Regionals	Rhodes University
2013	Second place , CSIR CyberGames	Rhodes University

Papers and Presentations

SATNAC

Port Elizabeth, South Africa

POSTER PRESENTATION <USING EXTERNAL ETHERNET AVB DEVICES FOR AUDIO PLUG-IN PROCESSING>

2014

- Work-In-Progress poster presentation of the work I was doing for my masters research, using the XMOS AVB microcontroller as a hardware plug-in for audio processing

SATNAC

Hermanus, South Africa

PRESENTER FOR <AN ETHERNET AVB EFFECTS UNIT IMPLEMENTATION USING XMOS ARCHITECTURE>

2015

- Updated and full presentation of the work I was doing for my masters research, using the XMOS AVB microcontroller as a hardware plug-in for audio processing

SMM4H

PAPER FOR SHARED TASK <RELEVANCE-WEIGHTED SENTIMENT ANALYSIS OF REDDIT POSTS>

2024

- Participated in a shared task to analyse and classify the sentiment of reddit posts from a social anxiety subreddit

Education

Bachelor of Arts, Rhodes University

Grahamstown

BA IN COMPUTER SCIENCE AND COMBINED ENGLISH LITERATURE AND LINGUISTICS

2009-2011

INSTRUMENTAL MUSIC STUDIES 1 (JAZZ VOICE)

2010

SOUND TECHNOLOGY 1 (AUDIO ENGINEERING AND RECORDING, BOTH LIVE AND IN-STUDIO)

2012

Bachelor of Science (Honours), Rhodes University

Grahamstown

BSc (HONOURS) IN COMPUTER SCIENCE, COURSEWORK AND DISSERTATION

2012

Honours thesis: Notation systems for machine translation of sign languages

Honours coursework modules: AI, Hardware Interfacing, Computational Linguistics, Networks, Image Processing, Information Security

Incomplete - Master of Science, Rhodes University

Grahamstown

MSc IN COMPUTER SCIENCE BY DISSERTATION

2013-2016

Masters thesis: Audio processing over an audio network using AVB and XMOS

Occasional Studies, University of Cape Town

Cape Town

INTRO TO PSYCHOLOGY

2025