David Barrell

Delivery Lead & Software Engineer

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about

I am passionate about finding novel solutions to new problems, particularly in software engineering. I am excited by clean APIs, well-structured code, novel software architecture, well-tuned CI/CD pipelines, and working with intelligent, thoughtful people.

I have built up experience in a range of areas, from infrastructure engineering, backend development and software architecture to pitching and delivering projects, but I thrive where I can work with a team of people who share my passions, whether I am contributing code, or leading a project's delivery.

Outside of work, I spend my time in the theatre, behind a music stand, or on the hockey field.

experience

Culture Amp
June 2018 - Present
Melbourne, Australia

Delivery Lead/Senior Software Engineer

I began on the Collective Intelligence team, working to draw insights out of the results of our customers' surveys in order to help those customers collect, share and act on employee feedback, before becoming Team Lead of the Comments team in Jan 2019.

Since then, I have led and contributed to numerous projects, eventually as a Delivery Lead, including automated comment translation, rewrites of survey template management, a user-consumable reporting API, and various infrastructure uplifts.

I was promoted to Senior Engineer in early 2020, and continue my involvement with the SRE practice, handling infrastructure design and deployments for numerous new services, as well as contributing to internal infrastructure tooling and a construct library built with AWS's Cloud Development Kit (CDK).

Health and Biomedical Informatics Centre R2, The University of Melbourne
July 2015 - May 2018
Melbourne, Australia

Software Developer

Ongoing development of GRHANITE medical data extraction system, enabling collection of anonymised data from clinics, pathology labs and hospitals.

Undertook major rewrite of client-side codebase in C#, released interfaces for new clinical management systems in SQL, developed custom technical support tools.

Oversaw Git usage and created organisation's build servers and processes.

Capgemini
Jan 2018
Melbourne, Australia

Senior Consultant (Contractor)

Contracted to provide advice and assistance in effectively deploying a Python application to Heroku and AWS.

Teenyco
July 2016 - February 2017
Melbourne, Australia

Co-Founder & CTO

Aimed to improve ultrasound diagnostics for use during pregnancies, as well as foster an increased connection between parent and unborn child. Developed technique to 3D print tangible models by extrapolating meshes from 2D ultrasound images.

Awarded CMB Capital $10k award for Best Startup at the Wade Institute in 2016.

The Baby Club
October 2016 - March 2017
Melbourne, Australia

Software Developer

Developed eCommerce website and back-end in Django, with a focus on Stripe API integration, handling single payments, as well as a custom lay-by implementation.

TuteMe
January 2016 - December 2016
Melbourne, Australia

Co-Founder & CTO

Developed a mobile tutoring marketplace, connecting univertsity tutors with students in a scaleable way. Managed stakeholders and business partnerships, along with branding and marketing campaigns, and built the app and backend.

Ormond College
Jan 2015 - Dec 2015
Melbourne, Australia

Software / Web Developer

Developed internal portal for 600+ staff and students, including custom plugins to integrate with College's existing systems.

leadership

Chair — Ormond College Middle Common Room

Elected executive of the graduate student body at Ormond College. Along with a team of 5, I represented the interests and welfare of 100 postgraduate students, and was responsible for managing a $50,000 budget, contributing to college-wide operations, and advising on decisions and strategy affecting community and long-term culture.

Mentor — SuperHack 2017

Mentored a team of high school students in a hackathon aimed at providing young girls with exposure to engineering careers. Created an IoT pill dispenser designed to improve adherence to drug regimens, placing second in the competition.

Musical Director / Technical Director — Various theatre companies

In these positions, I have worked with the cast and crew of over a dozen productions, developing my leadership and interpersonal skills, as well as my ability to navigate complex issues in a team. The diverse interests and individuals involved in artistic teams often create challenging scenarios, which require careful leadership and creative solutions. I have found the skills these experiences have given me complement my technical leadership well.

education

2016 - Present

Master of Engineering (Software)
First Class Honours average
The University of Melbourne

2012 - 2015

Bachelor of Science (Elec. Systems)
The University of Melbourne

2012 - 2015

Diploma in Music (Practical)
The University of Melbourne

2011

VCE, ATAR: 96.75
Scotch College, Melbourne

projects

CommunityAid — National Finalist in Microsoft Imagine Cup

Django-based web application designed to assist communities to help themselves in disaster situations. Allows users to quickly understand their immediate situation, and respond to events during and after an emergency. Utilised Twilio for alerts, and Azure for deployment.

OnTask — Django and Ionic Mobile App

Lead Developer for team of five, creating a gamified job sharing app for client. Allows users to post tasks, apply and bid for tasks, and rate each other on task completion. Masters Software Project at The University of Melbourne.

Non-English Tweet Sentiment Analysis — Cluster/Cloud Computing

Produced a report examining the sentiment, and other data, of non-English tweets in Australia. These tweets were harvested and stored in CouchDB, which was then used to analyse the data. Visualised on a simple front-end, utilising MapBox and D3.js. Included fully automated deployment to OpenStack, using Boto and Ansible.

SliderAI — AI Computer Player

Developed a game-playing AI for the game 'Slider' in Java. Utilising a alpha-beta pruning strategy and an implementation of the TDLeaf machine learning algorithm to improve performance over time.

references

Prof Rufus Black
Vice Chancellor
University of Tasmania
rufus.black@utas.edu.au

Dr Deborah Hull
Executive Officer
History Teachers' Association of Victoria
d.hull@htav.asn.au

Contact numbers available on request

technical skills

Languages	Ruby, Elixir, Kotlin, Python, Java, Python, Typescript, C#, C
Frameworks	React, Flask, NodeJS, Django, ASP.NET, AngularJS
Databases	PostgreSQL, MSSQL, MySQL, MongoDB, CouchDB
Other	SRE, Event-sourcing, Microservices, CQRS, AWS, Docker, Cloud Development Kit (CDK)

More information, including other projects and full work history, can be found at www.davidbarrell.me.