

Eric Man

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PROFILE

I'm passionate and I emphasise attention-to-detail. A quote applicable to my attitude towards building software:

"When you're a carpenter making a beautiful chest of drawers, you're not going to use a piece of plywood on the back, even though it faces the wall and nobody will ever see it. You'll know it's there, so you're going to use a beautiful piece of wood on the back. For you to sleep well at night, the aesthetic, the quality, has to be carried all the way through." — Steve Jobs

SKILLS

Very experienced:

Python, Django, Django REST framework, Lua, Virtualenv/Pip, Git, SQL

Was Experienced at (Inactive > 6 months):

Facebook React, SASS, Javascript, CSS, Jade, html5, Gulp, Grunt, Gerri, Jenkins CI, Docker, EC2

EXPERIENCE

Technical Lead, GradConnection 2014 Present

October 2015 to September 2016, helped screen and hire a replacement Team Lead. Continue development of the university white-label product, as well as building the replacement platform using Django and Django REST framework to au.gradconnection.com, which syndicates job opportunities to each of the university white-label nodes. During this time frame, acted more as a senior developer in the company, continuing designing and implementing the architecture of the next gradconnection, reusing technology from the white-label product, guiding colleagues through code reviews, designing and implementing the data migration process from existing au.gradconnection.com to the new platform. Helped select contractors to maintain docker infrastructure, lock down SSH access to servers with VPN, and backups. Transfer active management responsibilities to the replacement team lead.

June 2015 to September 2015, hired & led a 5 person South African team (See **Notes₁**) to build a white-label product that can instantiate customised Django web applications for half a dozen universities, each university's instance subscribing to a selected feed of job opportunities, using push rest-hooks. Designed and implemented a few core components. (REST API hooks subscriptions to a central jobs depository, data model, REST API server, batching REST API calls on the client and server, REST pagination, Postgres views backed by django models, domain specific language for customising fine-grained field level permissions for the REST API.) As of September

2015, the product generates six figures in yearly recurring revenue and forms the backbone of the company's revenue growth in the next three years. Instantiating a new instance for a university takes minutes to enter the colors, layout, login integration options, and minutes to run an ansible command to deploy the new instance. Built with Django REST framework and Facebook React, with gulp, sass, Suzy grid, Redux etc.

June 2014 to June 2015, partially built the backend of the next GradConnection platform using Django REST framework. Moved the company to Gerrit for code reviews and Jenkins for Automated Unit Testing. Interfacing with the appropriate libraries, written Git commit hooks to automatically correct code to PEP8 format and command line tools to quickly view code not covered by unit tests. Implemented advanced techniques such as: "And" and "Or" permission classes operators to increase productivity in defining and modifying permissions across a dozen ViewSets, building a Mixin to customise permissions on a field level in Serializers for fine-grained control of permissions (See **Appendix**), and using a Django non-managed model that is backed by a Postgres View to implement complicated algorithms in SQL to fulfil business requirements in a performant way.

Django Developer, GradConnection 2013 2014

March 2014 to June 2014, on top of the existing GradConnection product, built a tool for employers to collect graduate's expression of interest in Career Events. Built using Django REST framework and AngularJS.

September 2013 to March 2014, Implemented new features in the GradConnection Django website and optimised existing code. The project was mostly made of code that was written in a rushed manner during the initial phase of the startup when the company was still finding product/market fit. Changes to caching and optimising key ORM calls improved performance to the extent of saving the company tens of thousands of dollars a year in server costs.

Django Developer Intern, GradConnection 2012-2013

Implemented new features in the GradConnection Django website. Added translations to Cantonese and added multiple language support.

Freelance Django Developer 2010 2014

Developed Django websites for a number of clients. Business discontinued as I moved into my full time role at GradConnection. Clients very happy and impressed.

Software Engineering Honours Student 2013 2013

Written a thesis and built programs in Haskell Accelerate, a domain specific language for computing problems on Nvidia graphics card.

Hobbyist Programmer 2003 to Present

<http://github.com/meric/12l> Fully featured Lisp/Lua Hybrid Programming language. (See **Appendix**). <http://github.com/meric/leftry> Parser generator, specify left recursive grammar with algorithm I designed. Dabbled in Haskell, C, C++, Objective-C, BASIC.

EDUCATION

University of Sydney, Australia —Bachelor of Software Engineering (Hons.), 2014
(See **Notes**₂)

University of Sydney, Australia —Bachelor of Commerce majoring in Finance, 2014

INTERESTS

Philosophy, Walks, Software.

REFERENCES

1. Eric is a badass. I enjoyed working with him immensely at GradConnection – he's dedicated, doesn't need much sleep, and more often than not does the right thing. The fact that we were working in different timezones would have been a way bigger issue without him on the team.

— Brad Merlin, Software Engineer, GradConnection, on 10 September 2015
melinbrad@gmail.com

1 June — 15 September 2015, resigned mid-August.

2. Eric is smart, hard-working, cheerful, enthusiastic, quick-learning, and a creative problem solver. We've called upon him several times at very short notice, when we needed to throw together a demo, or hack up some new features, and time was short.

Eric always dives into our code enthusiastically, no matter how hacky or crufty it is before a deadline. He works hard to deliver results on time; if he hits a wall, he finds a way around it.

In a startup, deadlines can be stressful and tempers can sometimes run high; Eric's cheerfulness and relentless positivity avoids escalating any situation.

All in all, Eric is a great developer and a great guy. I wouldn't recommend you hire him though, because we found him first.

— James Boyden, CEO, SnapDisco, on 27 March 2013

james@snapdisco.com

At various times in 2013/2014, built a JSON API that connects to a payment processor as well as allowing users to access their product's core functionality and an android application in Python.

NOTES

1. (Dated September 2015) The company's structure is: Sales Team as management, and Development Team as engineering. It lacked a leader at the top of the organisation that can mediate the responsibilities for between both departments. As the technical+team lead I could have done a better job in planning ahead frequently changing business requirements, better communicate business requirements to the team, and better communicate the kind of code they are expected to produce. These weaknesses in my role as a team lead, in the structure of the company, and the 8 hour time difference between Cape Town and Sydney meant two team members resigned as the product was complete, despite its apparent success. I think the company needs a much more experienced team lead, who not only is technically competent and have good communication skills, is also able to provide solid leadership, be able to more proactively manage the expectations of the company's Sales team, and resist pressure from the Sales team despite them being the owners of the company.

2. Software Engineering Units I have studied that involved programming:

| | |
|----------|--|
| COMP2007 | Algorithms and Complexity |
| COMP2129 | Operating Systems and Machine Principles |
| COMP3308 | Introduction to Artificial Intelligence |
| COMP3615 | Software Development Project |
| COMP5046 | Statistical Natural Language Processing |
| COMP5348 | Enterprise Scale Software Architecture |
| ELEC1601 | Foundations of Computer Systems |
| ELEC3609 | Internet Software Platforms |
| ELEC4712 | Honours Thesis A |
| ELEC4713 | Honours Thesis B |
| ELEC5619 | Object Oriented Application Frameworks |
| INFO1103 | Introduction to Programming |
| INFO1105 | Data Structures |
| INFO2120 | Database Systems 1 |
| INFO3220 | Object Oriented Design |

The minimum grade I have achieved in the above courses was "Distinction".

APPENDIX

Example: And/Or/Not Permission Class Operators.

```
permission_classes = [  
    Or(IsStaff, IsReadOnly,  
        And(IsCreateOnly, Not(IsStudent), IsAuthenticated),  
        And(IsUpdateOnly, IsRecruiter, IsOwner('members.user')), ),  
]
```

Example: Field Level Permissions:

```
class XXX Serializer(FieldSpecificAuthorizationMixin, HyperlinkedModelSerializer):  
    class Meta:  
        fields = {  
            'url': [],  
            ('is_active', 'password', 'email'): [  
                Or(is_staff_or_owner, IsCreateOnly)  
            ]  
        }  
    }
```

Example: Mixing Lisp/Lua and Lua quasi quoting (<https://github.com/meric121>)

```
(fn circuit_and (invariant cdr output truth)  
  (cond cdr  
    (let (  
      car (:car cdr)  
      ref (lua_name:unique "_and_value"))  
      \  
      local \,ref = \,(expize(invariant, car, output))  
      if \,ref then  
        \  
        (cond (:cdr cdr)  
          (circuit_and invariant (:cdr cdr) output truth)  
          \"\,truth = \,ref)  
        else  
          \  
          \,truth = false  
        end)))
```