

## Profile

I am a student at VUW. Previously system administrator @MMC and JS dev @SLSNZ. I love maths, crypto, poetry, tea and —[—>+—.[—>+—.+++[->+++++.+++++.+++++. ———.—[->+—.+[->+++++.+++++.+++++.

## Skills

### Problem solving

I find great joy in solving problems. Every time you find something that is twitching your eye today, is worth the joy of solution tomorrow. When ever I find loosen screw, or ECB mode usage, typo in someones code/readme, I always get a lot of satisfaction fixing it.

### Learning

In my short career I've learned to learn. New concepts, ideas, problems, algorithms are there awaiting to be learned. Last year I had to give tutorial on Web Scraping, at KiwiPyCon, and I had only months to learn it, write tutorial, and present. I get a lot of joy, from understanding things, how they work, and how I can possibly use them to solve problems.

### Teaching

Teaching is one of the most challenging thing I ever did. Planning, simplifying, format, structure. Last year I taught programming and cryptography at Mount Maunganui College in my spare time. Organizer of N-jams. I gained a lot of knowledge from my teaching, and become better in my expert areas.

## Key skills

python

js

bash

git

php

osx

linux

json

crypto

## Interests

### Cryptography and Security

Quiet recently I become very interested in cryptography and security. In the past have build Challenge-Response authentication module for PHP project. Recently I got interested in FIDO Alliance authentication protocols, such as U2F and UAF, and will be giving talk about it in September at KiwiPyCon.

### Backend development

I love writing business logic. From the db models, static content routing, authentication modules, to api development, and application deployment. I just love it. My favorite framework is Python Flask. The elegance and simplicity of the framework had always attracted me to Flask. I had used it for numerous projects, including HackFest2014, FIDO U2F Demo, Fleeter(Flask twitter) and others. I also had written few projects in PHP, most recent of which is FACV, a simple notice board where anyone can post a notice.

### Data visualization

I always loved data visualization. From Minards Napoleon Russian campaign, to countless D3 visualizations. In 2014, SoTAKL hackathon, together with my team, we created visualization of property sales, and their type using Python flask framework, together with google maps and D3. In my spare time I've collected data about visa requirements, generated massive JSON DB, that is called visas(herrjemand/visas), I made data visualization as well (herrjemand/Randir). I am a maintainer of countries(mledoze/countries) project, which is JSON DB of all ISO countries and their basic info. I've also generated JSON DB of 250 Russian poets, and their poems(herrjemand/welikolepie), and planing to do data analysis to match authors interaction.

## Projects

### Visas(herrjemand/visas)

Have you ever thought, what visa do you need to a %country%? Visas project is a JSON database of countries visa relationships for over 260 states, with over 56k relationship records. To work with this dataset, I created a tool, written in python, that helped me to manage complicated countries relationships, and their information. I also created visualisation of the data that can be found at <https://herrjemand.github.io/Randir/>.

### Flask FIDO U2F Demo(herrjemand/U2F-Flask-Demo)

During my research on FIDO U2F, I have discovered, no good demo's that you can just play and break. Additionally I wanted to practice my Flask skills. This is a simple Login/Register demo application, that allows you to play with your U2F key. Tech stack: Flask, SQLite, python-u2flib-server, PBDF2, zepto.js

## Projects

### Rip Current(herrjemand/ripcurrent)

A game that supposed to teach kids, how to behave them selves at rip current. SLSNZ game development project. Self-written canvas based 2D JS game engine. Hero module, movement calculation. Layers, obstacles, drag, levels, events. Documentation using JSDOC. Gulp for building. Vanilla JS.

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### FACV - Free Adverts CV(herrjemand/facv)

Group diploma project with my friend from Russia. As a diploma project, we decided to do card notice board. A user can search and view cards. All cards separated into twelve different categories. User can add his own card, without logging in, with restriction to five cards per day, per I.P. address. Admin can login, and add/edit/remove cards. Tech stack: Vagrant(devenv), PHP5.5, MySQL(PDO), jQuery + Foundation, git.

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## Work

### Mount Maunganui College

System administrator

2011-2014, 2014-2016

School system administrator. Involved tech support, network maintenance, server management, hardware repair, scripting, image deployment, OSX/Linux/Windows management. In my free time taught cryptography 101 for senior students. Participated in CompSci course development.

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### Surf Life Saving NZ

JS Game Developer

2015

Developer of the RipCurrent game, that were supposed to teach kids how to behave at rip currents.

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## Public speaking

### Web Scraping

KiwiPyCon 2015

Tutorial | 2015

Tutorial on how to strip/parse webpages using python and BeautifulSoup4.  
<https://herrjemand.github.io/KiwiPycon2015>

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### Summer of Tech random Alumni talks

SoT Events

Talk | 2016

Doing alumni intros for SoT events.

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### Universal Second Factor Authentication

NZPUG Wellington Meetup

Talk | 2016

Introduction to FIDO U2F - a phishing proof second factor authentication protocol.  
<http://slides.com/herrjemand/u2f-python>

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### Universal Second Factor authentication, or why 2FA today is wubalubadubdub?

KiwiPyCon 2016

Talk | 2016

Introduction to FIDO U2F - a phishing proof second factor authentication protocol, or why today's second factor solutions are failing.

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## Teaching

### Code Club

Mount Maunganui College

Talks | 2013

Doing lunch talk on programming during lunch breaks

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### Advanced Computer Science / Cryptography Club / CompSci courses advisor

Mount Maunganui College

Talks/Tutorials | 2015

Introduction to advanced computer science for year 11/12/13. Introduction to cryptography for year 11/12/13. Advisor on compsci program.

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