Elliot T. Sawyer

Wellington, New Zealand
Contact: https://sawyer.nz/contact

Profile

I am a professional web developer with 22 years of extensive experience with native PHP and a variety of frameworks. I have applied my knowledge on a diverse set of projects, from medical education to online banking. I am seeking to fill a full-stack senior developer position that will allow me to creatively solve any challenge that is thrown at me.

Education

Arizona State University - Tempe, Arizona, USA
Bachelor of Science, Computer Science, May 2007

Skills

Programming Languages
PHP, Javascript, Python, Ruby, Java, Perl

Databases
MySQL, PostgreSQL, MSSQL Server, Redis

Technologies and Frameworks
Silverstripe, Laravel, NodeJS, Vue, React, CakePHP, Bootstrap, Docker

Search
Solr, Typesense

Authentication
Auth0, Okta, AzureAD, Google, RealMe

Payments
Bitcoin, Stripe, Windcave, Paystation

Work Experience

Senior Silverstripe Developer / Team Practice Lead, Catalyst IT Ltd
Wellington, New Zealand - May 2018 to Present

- Expert level proficiency with all versions of Silverstripe, from 2.4 to 5.1, as well as general PHP knowledge using Laravel and other frameworks.
- Specialised knowledge with authentication schemes including SAML and OAuth with providers such as Auth0, Okta, Azure AD, and Google.
- Responsible for using Silverstripe for e-commerce work using Stripe, Windcave, and PayStation as payment processors
- Implement self-hosted multifactor authentication schemes in Silverstripe using TOTP, Yubikey, and cryptocurrency hardware wallets.
- Train new and existing developers on latest development techniques and consult on security guidelines in accordance with the OWASP Top 10, New Zealand Information Security Manual, and other information and cybersecurity practices. Created a standardized development environment for colleagues of various skill levels (including designers, testers, salespeople, and trainers) to work on Silverstripe websites without any web development knowledge.
- Develop websites using Silverstripe on Silverstripe Cloud and Catalyst Cloud
- Create search results with the Solr search engine.
- Consulted on RFP's involving security best practices and cryptography implementations, according to the OWASP Top 10 and NZISM guidelines.
- Conduct code-reviews and security assessments, report vulnerabilities as required.
- Developed NZTA's Security Development Lifecycle Tool (SDLT) and architected it into a SaaS offering on a Kubernetes platform.
- Maintenance and development for local and central government websites.
- Responsible for running training courses for Silverstripe developers

Director, Cashware Limited (formerly CryptoPay)
Wellington, New Zealand - December 2017 to Present

Sole developer of a cryptocurrency payments processor that accepts Bitcoin, Litecoin, Ethereum, and Bitcoin Cash. The website accepts payments in crypto payments and pays invoices to New Zealand retail businesses, TradeMe listings, and bill payments through the New Zealand banking system.

Developer, Silverstripe Ltd
Wellington, New Zealand - August 2013 to May 2018

- Expert level proficiency with all versions of Silverstripe, from 2.4 to 4.1.
- Responsible for developing websites using the Silverstripe framework and CMS on the Common Web

Platform (CWP) and Silverstripe Cloud, and contributing to the open-source platform. Expert level proficiency with the Solr search engine on CWP and SilverStripe Platform using Silverstripe's fulltextsearch module, which I helped to migrate to SilverStripe 4.0 compatibility. Expert level proficiency of migration paths from older versions of Silverstripe up to recent versions of Silverstripe 4.

- Developed the New Zealand 2018 Census and its precursor software, using Angular JS and Silverstripe on the CWP infrastructure.
- Contributed to the development of an online banking system for a major New Zealand bank using Backbone.js. This application was implemented purely in Javascript, CSS, and HTML5, utilized responsive CSS, and was optimized for IE8 and a variety of mobile devices at the client's request. Heavy emphasis was placed on unit testing with Mocha and using behaviour-driven-development techniques with Cucumber.
- Contributed to the development of a site-wide redesign of a major New Zealand electricity company, including an online join form for residential and agricultural customers.
- Developed a tool for the Office of the Privacy Commissioner called Request My Info to assist users in requesting personal information from an agency without collecting or storing any personal information on the server.
- Responsible for mentoring developers, from interns to lower-level intermediate developers, to explain best practices, common mistakes and solutions, and to advance overall experience levels. Volunteered with Catalyst's Open Source Academy in January 2016 to provide a group of Year 13 students with Silverstripe development experience.
- Responsible for discussing and implementing sensible information security policies and practices across the entire company.

Website Developer, Careers New Zealand
Wellington, New Zealand - October 2010 to August 2013

- Responsible for the maintenance of the website code and databases that drove careers.govt.nz and supporting website using object-oriented PHP and MySQL. Duties included frontend and backend development, interfacing with third-party APIs, and addressing any security vulnerabilities flagged by a security vendor and core development teams.
- Developed and maintained plugins for content management systems (Silverstripe and Typo3) that display content of the website using XML, XSLT, and the model-view-controller design paradigm.
- Developed stylesheets using XSLT for a second website written in ASP.NET by an external vendor, and made the data within that website available to other Careers New Zealand websites.
- Developed and deployed production level applications using CakePHP, including the Canterbury Careers website and a public API to serve content from our jobs database..
- Developed unit testing scripts using PHPUnit and continuous integration build scripts using Jenkins.
- Developed our mission-critical Jobs Database product with Silverstripe 3.0 using agile development methods. Successfully migrated content from a legacy MSSQL database into Silverstripe using a custom-built API with CakePHP.
- Ensured that all presentation code placed on the CareersNZ website adhered to New Zealand government accessibility standards (NZ WCAG 2.0) as closely as possible.
- Interfaced with various API's to display third-party data on the Careers New Zealand website using Google Maps, TradeMe using OAuth authentication, SOLR, and others.
- Virtualised a surplus web server to create six virtual instances of Debian 5 and 6 for various development needs using ESXi. Process involved deploying Debian, installing pre-configured packages from apt-get, compiling code from source, configuring databases and various programming languages, backing up crucial code and database tables, and maintaining each instance of the operating system to ensure they behaved consistently.
- Implemented a single-sign-on application using SimpleSAML that allowed students in several hundred New Zealand schools to log into the website using their school credentials.

Lead Developer and Co-Founder, Beersurfing.com
Phoenix, Arizona, USA, 2008 to 2010

Senior Support Systems Analyst, The University of Arizona College of Medicine
Phoenix, Arizona, USA - November 2007 to September 2010

IT Temp, Fox Television (KSAZ Fox 10)
Phoenix, Arizona, USA - August 2007 to October 2007

Student Worker IV, Arizona State University Department of Computer Science
Tempe, Arizona, USA -December 2004 to May 2007

Student Worker II, Arizona State University Department of Language and Literature
Tempe, Arizona, USA January 2004 to December 2004

Freelance Website Developer
January 2004 to September 2010

Activities and Awards

- Zend Certified PHP Engineer, #021929
- Careers NZ Chief Executive Award
- TUANZ Innovation Award Finalist 2011
  - Best Government Website
- LiveJournal.com Abuse Prevention Team
  - Volunteer (2007 to 2010)
- Boy Scouts of America, Eagle Scout

Freelance work and contracting

LVL51, FIFA Women's World Cup
Remote, August 2023

- On-call support for high-profile live event

New Zealand Search and Rescue
Wellington, New Zealand - May 2020

- Install and configure Solr search for CWP

Connection Technologies
Wellington, New Zealand - March 2020

- Install and configure Silvershop e-commerce module

Extracurricular interests

- Cryptocurrency: Bitcoin and practical blockchain applications
- 3D printing
- Raspberry Pi
- Electronics
- Real estate and finance

Source Code and Knowledge

StackOverflow
https://stackoverflow.com/users/945916
https://stackoverflow.com/users/2719538

Github
https://github.com/elliot-sawyer
https://github.com/silverstripe-elliot

Work Authorization

New Zealand - Citizen
United States - Citizen

References

References are available upon request.

Open Source Contributions

I am a very active open-source contributor. I am a well-known figure in the Silverstripe Slack community as **@null** and actively contribute to discussions while helping new and experienced members. My open-source achievements are listed below:

- **bootswatcher -** a kickstarted Silverstripe project using pre-made themes from Bootswatch.com
  - https://github.com/elliot-sawyer/bootswatcher
- **silverstripe-linkfield**: I volunteered as a maintainer after the primary maintainer became ill. We both continue to support it for the community, where it is gathering growing support as a complete replacement for the abandoned "linkable" modules
  - https://github.com/gorriecoe/silverstripe-linkfield
  - https://github.com/gorriecoe/silverstripe-link
- **silverstripe-mysql-ssl**: Restores SSL support for MySQL in Silverstripe 4. No Silverstripe installation has supported this since SS4 was released, so I made a module that adds it back in. A few users have reported to me that it's the only way to connect Silverstripe to a MySQL database on Azure -
  - https://github.com/elliot-sawyer/silverstripe-mysql-ssl/
- **silverstripe-ipsum**: a silly module for generating fake test pages. I upgraded it to Silverstripe 4
  - https://github.com/toastnz/silverstripe-ipsum/pulls
- **silverstripe-helpdesk**: a basic helpdesk module for SS3, which I upgraded to SS4 and evaluated as a possible OSS alternative to Freshdesk
  - https://github.com/codecoyotes/silverstripe-helpdesk/pull/3
- **csp-capture**: this was a tool that I wrote to learn about content security policy violations on a client's website which automatically generated an appropriate CSP header for the recorded violations
  - internal project not released
- **silverstripe-matomo**: adds Matomo support in a CSP-friendly way to any Silverstripe 4 project -
  - https://github.com/elliot-sawyer/silverstripe-matomo
- **managed-emails**: this is a tool I created that allows users to manage generated email messages in the Silverstripe CMS without needing a developer to create a template for them. It's very similar to userforms and gives users a WSYIWYG for editing email content
  - https://github.com/elliot-sawyer/managed-emails/
- **nzbanks** :this is a Silverstripe module for managing the list of 3000+ banks in New Zealand. It includes support for identifying the bank and branch based on the account number, and validates an account number is valid according to its checksum
  - https://github.com/elliot-sawyer/nzbanks/
- **nzstreets**: this is a module I developed as a free open-source alternative to the NZ Post Address Lookup service, which uses open LINZ data as a source. It is intended to be a drop-in replacement for any existing NZPost supported form.
  - https://github.com/elliot-sawyer/silverstripe-nzstreets
- **nzta/sdlt**: I was formerly a maintainer for NZTA's Security Development Lifecycle Tool. I oversaw maintenance work and ongoing development of the open-source project during my time at Catalyst. The project was forked by another user after a licensing disagreement with NZTA.
  - https://github.com/nzta/sdlt, forked to https://github.com/zaita/sdlt
  - https://github.com/nzta/sdlt-theme, forked to https://github.com/zaita/sdlt-theme
  - https://github.com/nzta/sdlt-framework, forked to https://github.com/zaita/sdlt-framework