Gerald Kaszuba

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I have 26 years of experience in computer programming and related technologies, which includes 13 years professionally, and 13 years as a hobby in my early years. I have a wide range of skills including developing desktop applications, web applications, and game development.

Currently focusing on my own company at Slowchop Studios, I am also accepting work for game development related projects, Python/Django based projects, and Android application development.

Specialities that I am interested for work include Android, iPhone, Web Development, Game Development, Big Data, C++, C, Java, C#, Objective C, Python, Django, Performance Optimisation.

Skills

- Python
- PHP
- OpenGL
- Web Applications
- iPhone
- Android
- Video Games
- Open Source
- Java
- iPad
- Apache
- Big Data
- Cassandra
- Hadoop
- WebGL
- Web Design

- Objective-C
- Game Development
- iOS development
- C++
- Ruby on Rails
- SQL
- Linux
- REST
- iPhone development
- JavaScript
- MySQL
- Data Visualization
- Redis
- Amazon EC2
- Scala
- Responsive Web Design

- Web Development
- Programming
- Mobile Applications
- Git
- JSON
- iOS
- Ruby
- C
- Game Design
- Django
- PostgreSQL
- 3D visualization
- ElasticSearch
- Multiplayer Design
- Optimization
- Amazon Web Services (AWS)

Experience

Slowchop Studios
Director
2004 - Present

Specialising in Game Design, Architecture, and Development.

In early 2014, I was contracted to make improvements and localisation programming for the "iHeartRadio" Android application.
http://goo.gl/3KSwf5

In late 2013, I created a system to automatically trade in crypto-currencies such as Bitcoin and Litecoin.

In 2012, I created an Android application called "WiFi Heat". It allows you easily visualise the signal strength of different WiFi networks in an area, allowing you to optimise your own access point configuration and location. http://wifiheat.com/

In 2011, I did contracting for various companies to create custom Django and iPhone based applications. These applications include the inthemix iPhone app, the Carlton Dry 100 iPhone app, and an employee time management Django app for an architectural firm.

In 2010, I released an iPhone game called "Dark Fighter". It is an Internet multi-player "real-time strategy" game which took over a year to make. http://www.darkfighter.com/

In 2008, I created a game for iPhone/iPad called "Tower X". It is an addictive "tower defence" game which took about a month in development time. http://www.towerx.com/

In 2005, I created and ran the largest Australian player ranking system for the game "Counter-Strike: Source", called "ACSSR". The site ran for 3.5 years, which had about 5 million players ranked at the time. http://acssr.slowchop.com/

In 2004, I released an N-body gravity simulator called "Gravit". The project is Open Source and cross-platform. http://gravit.slowchop.com/

Black Foundry/Arbor Networks   05 / 2011 - 11 / 2013
Product Developer/Principal Software Engineer

From the start of the project, with another developer, created a security analytics platform for the cloud now called "Pravail Security Analytics". I became advanced at a myriad of technologies and programming skills.

Programming skills include Python, Ruby on Rails, Java, Scala, and the Gremlin Query Language.

Database development and maintenance skills include PostgresSQL, ElasticSearch, Hadoop MapReduce, HDFS, Apache Pig, Titan (Graph Database), Redis, Neo4j, Kafka, Apache Cassandra, and Apache Storm.

I now have strong experience in the use of, and internal workings of tshark, Snort, the PCAP file format (libpcap), OpenSSL, the SSL protocol, PKI (Public-key infrastructure), and probabilistic data structures such as bloom filters and Count-min sketch.

Cloud based service knowledge and integration skills include Amazon S3, Amazon EC2, Amazon ELB, Amazon EMR, Amazon VPC, AWS Import/Export, and Cloudflare.

An important part of the role was performance optimisation. I now have a deep understanding on performance scaling and tuning for very large amounts of data storage and data processing.

I wrote a custom SSL handler in Scala using Netty. This involved our own automated public-key infrastructure, client certificate validation, secure key generation and distribution.

The user-facing part of the project was written in Ruby on Rails, with a large amount of object-oriented JavaScript. The front-end technologies include jQuery and D3.js. I created the real-time visualisations for the front-end of the product. This includes beautiful and smooth visualisations that encompass many levels of detail. The types of dynamic visualisations I created include choropleths, animated scatter charts, a 3D globe (in WebGL) with real-time data.

Leighton Holdings Limited   11 / 2009 - 03 / 2011
iPad/iPhone Developer

The majority of this role was creating iOS based applications from scratch for the company's existing projects.

The Sound Alliance   10 / 2008 - 11 / 2009
PHP Developer

In PHP, created new features, fixed bugs, and increased performance for a set of sites owned by The Sound Alliance. These include Fasterlouder, inthemix, MessAndNoise, and SameSame.

Some of the interesting aspects of the work was web performance tuning, covering memcached and Varnish. I massively increased rendering and response times by designing and implementing the partial caching feature called "edge side includes" in Varnish.

I introduced, installed and educated the team in Jira and Confluence.

TileFile   12 / 2006 - 10 / 2008
Python Developer

Tilefile was a social network web application which was scrapped and replaced with a similar application called Storyz. My main focus was Python development for both projects. The majority of work was adding features fixing bugs in these projects.

In Python, as my first task, I created a distributed stress testing tool that communicated specifically to our APIs. It was to measure how many customers can be on the system before it is unusable.

I wrote a HTTP proxy in Python which modified HTTP payloads to be compatible with mobile devices. Specifically it changed chunked encoded

HTTP content to a single payload.

In Python I designed and wrote a system to separate the API layer from the main body of the project for performance and scalability reasons.

Keycorp   06 / 2005 - 02 / 2006
C++ Developer

Maintained an IDE developed specifically for EFTPOS machine software. This involved C++ MFC, integration with new device APIs.

TransitTV   03 / 2001 - 03 / 2005
C Developer

The Transit TV product was installed in 200 public transport buses in NSW, Australia. It involved an LCD screen installed in a bus showing static, animated, and video content. I was one of two developers on the new project, in a small team of 5 people. This project strongly increased my skills in C, Linux, OpenGL, and SSL.

Developed in C, I created the frontend "player" in OpenGL under Red Hat Linux to display smooth animation for static and animated text to commuters. Video was overlayed on top of the OpenGL rendered screen which we integrated with a proprietary hardware MPEG decoder. The software on the player also included a powerful, dynamic scheduling system.

Also developed in C++, I created a secure, low-bandwidth protocol for syncronising metadata, audio, and video data between the HQ servers and individual buses. The protocol decided between WiFi and GPRS for communication, depending on the data type and urgency of the data. The infrastructure developed also included a way to automatically upgrade software across the fleet without physical access.

I developed an administrative and content authoring web interface in PHP. It was designed to monitor the health of each bus and the fleet as a whole in an easy to comprehend visualisation. It also allowed content creators to design "templates" that can be used for static and animated text screens, such as news and trivia. This content could be triggered to immediately automatically to every bus.

Nextracom   02 / 1999 - 02 / 2001
Cold Fusion and PHP Developer

The majority of work was Cold Fusion development, and some PHP.

Development of e-commerce solutions for clients including Leighton Holdings and Raytheon Australia. These solutions includes integration with Westpac credit card transaction gateways, and maintenance of Microsoft SQL Server.

Independently developed a Java based chat application where the client was a Java applet, and the server was a stand-alone Java server. Some main features include a unlimited number of chat rooms, and multiple segmented areas per customer.

Created an automated DNS zone file generator with a web interface in PHP. It had the ability to create new domains, update DNS records, and signal the DNS server (BIND) to reload the configuration.