

BRANDON DALE KOEPKE

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SUMMARY

Fifteen years experience working in technology across diverse industries. While at Amazon, automated the retirement and defragmentation of racks for Amazon Web Services (AWS). Our team of ten engineers was recognized in 2016 at the bi-annual AWS All-Hands meeting for saving the company over \$250 million dollars. Before that I independently completed a similar project at Disney which saved the company over \$200 thousand dollars a year in perpetuity. While in University, worked as the lead developer for Onstream Pipeline Inspection and researched automating pipeline analysis.

EDUCATION

CFA II Candidate

CFA Institute

2016–

Bachelor of Commerce in Finance

University of Calgary

Calgary, AB

2007–2013

Bachelor of Science in Computer Science, specialization in Software Engineering

University of Calgary

Calgary, AB

2007–2013

EXPERIENCE

VOCATIONAL.....

Strawhouse Labs

Senior Software Developer

January 2017 –

Developed a templating and experimentation engine.

- o Redesigned a system for automating advertising copy mutation.
- o Developed an experiment and templating engine for automatically tailoring landing pages to individual customers.

Amazon

Software Engineer

October 2015 - January 2017

Web services for EC2.

- o Designed and implemented Capacity Bridge, a system for ensuring EC2 health while racks are retired.
- o Worked across teams to develop a fixed host (dedicated instance) retirement API.
- o Automated Capacity setting for instance migrations/evictions, halving our operational maintenance.
- o Discovered and fixed issues in Amazon's distributed metrics system.

Disney Interactive

Software Developer

January 2015 - October 2015

Lead maintainer for Club Penguin's production environment.

- o Developed and maintained Club Penguin's asset pipeline.
- o Disclosed major ldap vulnerability exposing thousands of credentials and personal data.

Disney Interactive

Associate Software Developer

May 2014 - January 2015

Streamlined Disney's microservice architecture.

- o Researched container virtualization platforms and presented findings to several working groups.
- o Migrated pre-production machines to container platforms using the LXC API.
- o Maintained two hundred development machines and several hundred production machines.

Onstream Pipeline Inspection

Software Developer

Summer 2011–Summer 2012

Developed a rich client for high resolution pipeline analysis in C#. Also wrote a Microsoft Excel extension for creating dynamic, reusable reports without developer intervention.

- o Wrote a UDP client for bulk downloading time series data from an embedded device.
- o Modified the OxyPlot library to use dynamic downsampling enabling real-time visualization of over 7 billion points.
- o Designed a referentially transparent binary formatting library that decoupled object deserialization from the objects themselves reducing the IO from over 70MB/s to just 256KB/s.

Rayburns Marine World

Systems Administrator

Summer 2003–Summer 2010

Managed Windows workstations, Windows and Linux servers, and network hardware.

PROGRAMMING LANGUAGES

Proficient: C, C#, F#, Java, JavaScript, L^AT_EX, Ruby, **Familiar with:** C++, F*, Haskell, OCaml, Python, SML, Scheme

COMPUTER SKILLS

Programming Paradigms: Imperative, Object-Oriented, Functional, Modular, Logic **Domain Specific Languages:** BNF, SQL, Regular Expressions

Development Tools: Version Control (git, svn), IDE*, Emacs, Vim, UNIX Build Tools **Operating Systems:** Windows*, Mac OS X, Linux, FreeBSD, Android

PROJECTS

COURSEWORK.....

CPSC-502

Research in Software Engineering

Fall 2011 - Winter 2012

Developed an algorithm and test suite for automatically finding metal loss in pipelines. Over 400GB of data was used in the evaluation process. The resulting algorithm found 90% of metal loss with 5% false positives.

FNCE-447

Capital Budgeting

Fall 2012

Analyzed the profitability of the Rosia Montana Gold mine for Gabriel Resources.

FNCE-445

Futures and Options

Winter 2013

Study of financial contracts where the payoffs are derived from pre-specified economic variables.

MGST-559

Market Data Management

Fall 2012

Predicted future stock price direction with an accuracy of 65% using a Naive Bayes classifier and 10,000 news articles.

SELF-MOTIVATED.....

FxSheet: Adding first-class higher-order function support to Microsoft Excel in addition to automated refactorings for common issues.