**Zach Smith (1099 Only)**

Python developer [zach.smith41@outlook.com](mailto:zach.smith41@outlook.com)

Proficient Intermediate

Programming Languages Python (mostly 3.4+) JavaScript

SQL (Oracle, Microsoft, IBM)

Operating Systems Ubuntu Linux Windows (7, 8, 10) Debian, RHEL

**Open Source Contributions**

*LiSE Life Simulator Engine for games like The Sims* <https://github.com/LogicalDash/LiSE>

Simple decorator-based Python API for rapid prototyping.

Uses a graph-based world model in a relational database with revision control

Web API implemented with CherryPy (similar to Flask) and msgpack.

Kivy *Cross-platform Python Application Framework for Natural User Interfaces* [http://kivy.org](http://kivy.org/)

Added selection of highlighting styles to the code input widget

Made it so if you have scroll bars, they can be on any side of the screen

Bidwire *Django-based email notifier for government websites* <https://github.com/RagtagOpen/bidwire>

Wrote a web scraper and a notifier to send emails

**Professional Work Experience**

**Intercontinental Exchange, New York City, NY**

***Software Development Engineer in Test (SDET)* March 2017 – May 2018**

Developed a test harness in Python, with special support for rapidly comparing large CSV data sets, using numpy and multiprocessing to perform many comparisons simultaneously in parallel. It has a web frontend using Bootstrap, loading test detail via AJAX. The web backend uses CherryPy, a lightweight web framework similar to Flask.

*Business impact*: Developers can find discrepancies in data more quickly and easily.

Developed a test automation framework with a rules engine for constructing expected values for a database loader, in Python using pandas. Rules are specified in JSON.

*Business impact*: Made it easier to detect regressions in loaders.

Used Jira to report and manage bugs in the system under test and the test framework.

**Transit (contract via DTG Consulting), New York City, NY**

***Programmer* May 2015 - Feb 2016**

Ported SQL procedures from an Oracle database into Python with SQLAlchemy

*Business impact:* The procedures are now faster, easier to understand, and capable of running many instances in parallel.

Wrote a new data extractor in Python to get a Microsoft SQL server to deliver data to Oracle.

*Business impact:* The analysts can now use data from the logic controllers in subway track switches.

Remade a data collection app into Python on the Kivy framework.

*Business impact:* The tablets used by station inspectors no longer need to run Windows.

**Manhattanville College (contract), Purchase, NY**

***Institutional Research and Planning Coordinator Jan-Jul 2014***

Developed TSQL queries to access data in a Microsoft SQL Server instance. Deployed said queries in Crystal Reports.

*Business impact:* Enabled advanced analysis of student retention across a wide variety of

variables.

**Internship Experience**

**DBSystems Corp. (under contract to College of New Rochelle), White Plains, NY**

***Tester 2011-Aug 2013***

*Tested web services meant to estimate financial aid for students. Documented cases where the web services did not appear to follow the official rules.*

*Business impact:* Accelerated deployment of the service; increased confidence in its reliability.

Started writing SQL queries to spec shortly after demonstrating success at it

Created interdependent views with complex joins to summarize College of New Rochelle students' academic standings, histories and debts

**Education**

Manhattan ville College, Purchase, NY

*Bachelor of Arts in Computer Science; Minor in Spanish, August 2013*