Zachary Spector

Python developer

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* 5+ years of Python hands on development experience in a variety of environments and product development life cycles.
* Knowledge of Software Development Life Cycle, QA Methodology and tools.
* Intrinsically motivated and able to work both individually or as a part of team
* Expert in scripting and application development using Python

**Programming Languages:**

* *Expert:* Python (2.7 and 3.4), SQL (Transact-SQL, Oracle, and DB2 SQL)
* *Intermediate:* JavaScript, Java, C

**Frameworks / Libraries**: Numpy, Django, Flask, CherryPy, Kivy, NetworkX, SQLAlchemy

**Operating Systems:**

* *Proficient:* Ubuntu Linux
* *Intermediate:* Windows (7, 8, 10), IBM z/OS, Debian 7.x

**Software:** *Intermediate:* Outlook, Crystal Reports, Word, Excel

## Professional Work Experience

**LiSE *Life Simulator Engine*** *for Gaming Industry (e.g. The Sims)* <https://github.com/LogicalDash/LiSE>

Product Development, January 2013 – Present

* Simple decorator-based Python API for rapid prototyping.
* Uses a graph-based world model in a relational database with revision control.
* Uses CherryPy (Python framework)

# **New York City Transit**, New York City, NY

* 1. *Programmer* May 2015 - Feb 2016
  + Ported SQL procedures from an Oracle database into Python with SQLAlchemy.  
    This included the ETL procedures that generated the data used in Stringlines, a d3.js-driven visualization tool to help understand the movement of subway trains.  
    *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**, 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.
* Used Python for creating temporary Databases in SQLite.

# **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.
* Used Python for developing database utilities.

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

* StiffScrollEffect, a modification to the standard swipe-scrolling behavior that makes it harder to scroll as the user reaches the edge of the scrollable area.
* The TextureStack widget, for building virtual paper dolls.

## Education

# Manhattanville College, Purchase, NY

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