

Jack Desert

developer@jackdesert.com

Little Rock, AR

+1 (971) 901-7899

My passions include delivering deployable work that moves the needle. That requires that process is in place: feedback on the work completed (including code reviews), automated testing, building it on a solid, proven tool, and making sure there are enough cloud resources behind it to keep up with traffic.

In the Python world, I've been in charge of creating the Python-driven machine-learning API that is used to locate residents in real time within an elderly care facility. It runs on Pyramid, Python 3.6, SQLAlchemy, Alembic, and Keras. In my spare time I'm building my Django skills with a pet data collection project.

In the Machine Learning world, I built a predictive API that uses a neural network to tell us where a resident is on campus based on incoming bluetooth signal strengths.

Big Data: At Cloudability we collected AWS usage data, stored it in a data warehouse, and made it available to our customers as graphs and charts with user-definable filters.

It has also been a pleasure to configure and deploy all of our EC2 boxes (Ubuntu) for our production, staging, and test environments at my current gig.

I have considerable experience with relational databases (MySQL, Postgres), and some experience with other data stores (Riak, Redis, MongoDB, memcached).

Although my roles have primarily been in development, I will always push for a clean, usable web experience. What good is a strong backend if our users can't find the right button to press?

My resume is attached. You can reach me at developer@jackdesert.com or schedule a phone call or an interview. Looking forward to meeting you and your team.

Sincerely,

Jack Desert

Jack Desert

developer@jackdesert.com

Little Rock, AR

+1 (971) 901-7899

Experience

BIPTech, Portland OR and Little Rock, AR

Architect / Lead Developer, October 2015 - present

Build a system that collects signal strengths received by bluetooth-enabled devices, and use that data to predict the location of each device.

- ◆ Design API payloads to support data ingestion and location prediction
- ◆ Choose a capable framework (Python Pyramid) and ORM (SQLAlchemy)
- ◆ Build out APIs using Pyramid models/views, and test them with Pytest
- ◆ Load-test the data ingestion pipeline with fake data to determine throughput
- ◆ Design and build a dashboard that supports collection and live display of training datasets
- ◆ Machine Learning: Develop a multiclass classification model in Keras to be trained on our collected training datasets, and integrate that model as a key part of our location predictor API
- ◆ Data visualization: Display five top signal strengths for a particular device on a smoothie chart (much like an oscilloscope)
- ◆ Document APIs in markdown and serve them up from Pyramid so the other engineers know how to feed in data
- ◆ Deploy system to AWS under systemd and behind Nginx

Consistently an advocate for launch of MVP

Cloudability, Portland OR

Cloud Engineer, March 2014 - May 2015

Built APIs, investigated data anomalies, enabled large-scale features in our Ruby/Rspec/Resque/GoLang/MySQL/Riak/S3/Postgres/Memcached stack which provided data analytics into cloud spending.

- ◆ Enabled comparison reports by building a single API endpoint that pulled SQL data for two different time periods independently, then stitched the data together on a per-day basis before returning it as JSON.
- ◆ Ensured that saved reports were always prewarmed in memcached so users could quickly see reports that would normally take minutes to load.
- ◆ Built a multi-threaded search-and-explore system in Ruby to find data anomalies between our raw data store (Riak) and our compiled data store (MySQL). Stored results in SQLite using the sequel gem, which was flexible as a query tool for finding the patterns of disturbed data.
- ◆ Prototyped a 6,000 writes/sec GoLang API for storing documents to S3 and retrieving them via metadata. This was so we could replace our original Riak raw data store with one highly searchable.
- ◆ Built a GoLang service that consumed 60GB CSV files to answer the question "How fresh is our data?", and provided an API to query the answer on a per-account basis

Proliferated the use of Pry. Named known technical debt. Wrote the docs.

Jack Desert

developer@jackdesert.com

Little Rock, AR

+1 (971) 901-7899

Flywheel, Redwood City CA

Ruby Engineer, July - Dec 2013

Unearthed a mountain of technical debt in a distributed, component-based architecture using Riak/RabbitMQ/EventMachine/Ruby/Rspec/Postgres/Node while also developing shiny new features. Consistently coaxed the desired functionality using **test first** with each component, and adding whatever new message types were required along the way. Notable accomplishments include:

- ◆ Built a robust, customizable geo-aware fares calculator, all the way from researching available technologies (PostGIS) to writing concise queries (Squeel)
- ◆ Created the concept of an expected vehicle type, so that additional messaging could be provided to the app if the responding vehicle was something other than a taxi
- ◆ Provided our fraud prevention team with Ruby methods to show clean and dirty users based on whether they had a blacklisted credit card

Got really comfortable with mocks, stubs, and let(). Kept asking **why**.

John McNeil Studio, San Francisco

Full Stack Rails Contractor, Feb - July 2013

Led a team of developers in launching a database-backed showcase of what JohnMcNeilStudio is all about. Initially my role was in architecting this Rails/JavaScript/Haml/Sass/Postgres/Rspec site and flushing out the admin dashboard pieces, but as the launch timeline was foreshortened, things got a little more exciting. First upper management needed to be persuaded to launch a quality subset, or MVP, of what was originally planned. Then task triage was required to ensure that the most important, foundational pieces were built first. More developers were acquired, most of them junior. Coached this team toward quality code and consistent Git workflow by injecting ad-hoc pair programming and test-driven development. Learned the art of stabilization, or “being the glue”.

Airbo, Boston, Massachusetts

Full Stack Rails Developer & Interaction Designer, Jan 2012 - Dec 2012

Delivered a quality user experience through a social site in a scramble-paced startup. Triageed which feature requests warranted building first, then implemented those in our Rails/Postgres/CoffeeScript/Haml/Sass/Rspec stack. Adopted “design first” as my mantra to kick off each sprint, which unlocked my team from the status quo of how our site already worked. Thus we moved on more quickly to clean, revised aesthetic and new vision. Gained a true appreciation for design, a quality mentoring in Rails, and became great friends with jQuery.

Jack Desert

developer@jackdesert.com

Little Rock, AR

+1 (971) 901-7899

Code Samples

Stethoscope

Machine-Learning API for predicting resident location from bluetooth signals
(Python, Pyramid, SQLAlchemy, Keras)

github.com/jackdesert/stethoscope-code-sample

Price Monitor

Data warehouse app that collects tire prices and allows user to search
(Python, Django, Postgres)

github.com/jackdesert/price-monitor

BIP Web

PDF invoice generator that shows exactly what a resident is billed for
(Ruby)

github.com/jackdesert/bipweb-code-sample

Education

Master of Science, Signal Processing and Mechanical Engineering, Dec 2004
University of Idaho, Moscow, Idaho