

A photograph of the Aurora Borealis (Northern Lights) over a snowy, rocky landscape. The aurora displays vibrant green and yellow-green curtains of light against a dark, star-filled sky. The foreground shows dark, snow-covered rocks and a smooth, icy surface. The image is framed by a large, semi-circular teal overlay at the bottom, which contains the title and speaker information.

# **runway: a data science platform**

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# Agenda

Why?: Goals

What?: Features

How?: Architecture

What's next?: Future directions

Live demo





# Goals of runway

- Capstone – synthesis of data science techniques with pre-existing development and database skills
- For the scientists – a basic toolkit of EDA and modeling techniques at our fingertips
- For students and enthusiasts – an appealing, easy-to-use mobile/web platform for learning about data science
- Community – enable sharing of datasets and models

# Current features

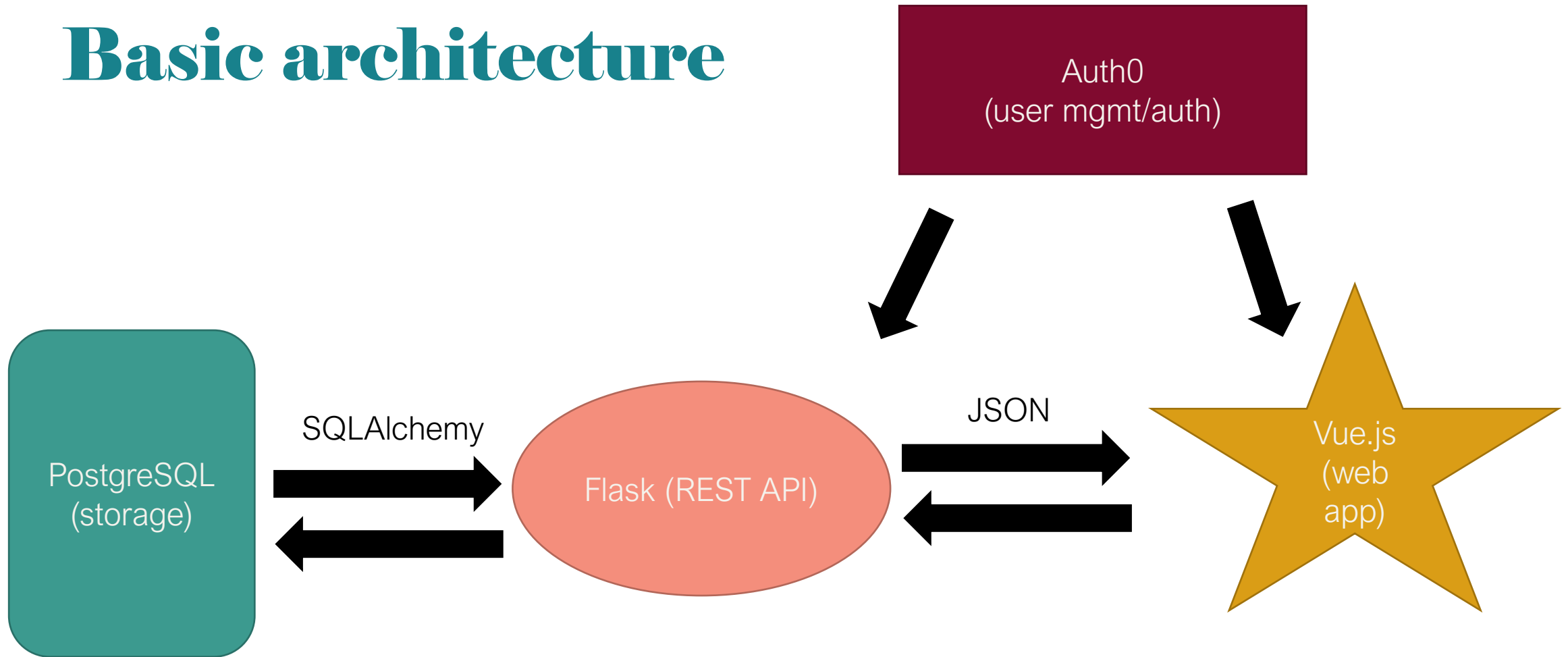
## DATA SCIENCE

- Creation of new datasets including one or more data files
- EDA – tables and visualizations including distributions, nulls, correlations
- Transforms – dropping/imputing nulls, one-hot encoding
- Modeling – easy forms to create and train models (just scikit-learn for now)

## PLATFORM

- Authenticated “power user” experience vs. anonymous “read only” experience
- Easy sharing of datasets and models
- Allows authenticated users to download data files and models (pickle format)
- Extensible – easy to add components for new EDA/transforms/models

# Basic architecture





# Future directions

- More EDA supported
- More models supported (incl. neural networks)
- Streaming data
- Scalability to large datasets
- Nicer user experience
- E-commerce...?



A vibrant image of the Aurora Borealis (Northern Lights) in shades of green and blue, set against a dark, starry night sky. The aurora's light patterns are dynamic and flowing, creating a sense of movement and natural beauty.

# Thank You (...and let's demo!)

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