James R. Hennessy
Software/Data ENGINEER
203.273.9215 | James.Ryan.Hennessy@gmail.com | Palo Alto, CA

- Chemo/Bioinformatics,ML/AI
- MySQL, OpenCV, Neo4j
- UNIX,Linux,Pytorch

- Dask ,CI/CD,Numpy/Scipy/Pandas
- Kubernates,Keras,Pytorch,Tensorflow
- AWS,GCP,Docker,.Kafka,Spark

- C, ElasticSearch,R,Julia
- Python ,C++,Airflow,Rust
- React, Looker, Plotly,

Atomwise   San Francisco, June 2021-Present
Software Engineer Data Platform,

Worked on Django ORM systems, created an ingest service of new and legacy data to Redshift. Created new end to end testing system , and implemented more efficient pipeline of data from scientists and researchers. Helped build the Machine learning platform for small molecules. Worked on migration to mono-repo, and started cost tracking of AWS and Kubernetes clusters for granular and high speed lookups. Used Amazon glue to implement a new ETL distributed system. Worked with ML team for data ingestion and clearing for models. Working with scientists to fit software tools to their needs. Helped build out a ml framework. Made interactive validation application.

J&J Digital Surgery(Acquired from Verb/Auris Health) Mountain View, CA, Aug 2018- June 2021
Software Infrastructure/Platform Engineer
 Used Numpy/Scipy/Pandas and c++.,rust. Root cause analysis of sensors,IMUS, endofectors and actuators. Focused on system software and hardware integration , created a hardware in the loop test suite. Worked on Yocto for embedded linux.Worked with and built tools for Surgeons and Clinical Engineers. Classification machine learning algorithms in Endoscopic Surgery in RGB-D. Brought Data Pipelines to life for 5-D/high dimensional data. Developed visualization tools for data,data interoperability,ETL . Worked with updating Jenkins and other CI/CD pipelines.Worked on ML on the edge with embedded system architectures, and QNX/RTOS operating systems. Built a computer vision platform. Used Bazel, gRPC, and protobuf as this was originally an Alphabet Company.

MachineVantage, **Software /Data Engineer**,   Berkeley, CA Oct 2017 – Aug 2018
Built APIS for Natural Language Processing on advertising and marketing campaigns, along with building ML models. Created ML platform for company to track and improve deployed models . Worked with MLflow. NEO4j development with multithreading, learned GraphQL. Streamed data via Kafka and Apache Datastream, built an end to end system.

Stanford Genome Technology Center, **Data Analyst/Software Engineer,** Palo Alto, CA   Jan 2017 – July2017
Built a MySQL/Postgres database for the Genome Natural Products Group hold tests and results, and scripted Python and PHP web applications to view and update the database. NGS experience. Developed web applications for large genomic data transformation and presentation. Worked in AWS. Did analysis in R and Python. Acted as the lab software engineer.   Coauthor on published paper in high impact journal. Studied on ML applications for cancer research.

https://bmcbioinformatics.biomedcentral.com/articles/10.1186/s12859-016-1260-x
http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0176334

Education & Honors

UNIVERSITY OF MIAMI, Coral Gables,May 2016
Bachelor of Science in Computer Science/Mathematics/Statistics; Minor in Finance, and Political Science
Alpha Lambda Delta Honor Society ■ *National Society of Collegiate Scholars* ■ *Coral Gables Scholarship*

Udacity Robotics/Computer Vision/Data StreamingData Engineering/Deep Reinforcement Learning Nanodegree December 2020:
-Kafka,Spark,Zookeeper,Celery, Distributed systems, fourier transforms, Fast matrix multiplication.
Edx, 2019-2020

Bioinformatics **Johns Hopkins**, Compilers **Stanford**, Drug Discovery **Davidson College**, Biochemistry **Harvard,** Chemistry **MIT** , Digital Image Processing **Northwestern,** Robotics **Columbia** , Underactuated Robotics **MIT,** Computational Neuroscience **University of Washington**.

Industry Event Participation
3rd Place MIT digital health hackathon- physical therapy and medical imaging project for eldery.
15 HACKATHONS, 2 TIME WINNER, 3 TIME RUNNER-UP. SEE GITHUB AND DEVPOSTS FOR MORE DETAILS

See code sample at https://github.com/jamesthesnake