

Mark Rose

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Founder, CXO,

Engineer

Avialae, LLC

2010 - present

Specializing in custom web application development and design, cloud infrastructure, consulting, training and teaching.

Within the span of 10 year, I've continued to take work as Avialae, leading to a different company forming, Legal Science, starting in 2014, and I jumped into that company full-time, but since 2018 started working with the state of California developing a policy tracking web application for the Department of Public Health. Some would call this my side hustle.

Notable achievements:

- Carekinesis content management system on Wordpress:
 - <https://www.carekinesis.com>
 - This is an example of many small sites I put together for small businesses since 2010
- LawAtlas Project leads to full-time position at Temple Law School and later the formation of the company Legal Science: <http://lawatlas.org/>
 - Avialae created the core technologies for Legal Science
 - Avialae created both versions 1 and version 2 of the site

- LawAtlas tracks public policy.
 - LawAtlas is v0 of MonQlce (see below)
- California School Wellness Policy Index (active development) - California Department of Public Health:
<https://policy-project.avialae.llc/>
 - *Supporting the state of California until the end of 2020, working through Sacramento State University*

Cloud Engineer

University of Virginia,
Charlottesville, VA

2019 - present

Working in the automation group, using extensive knowledge of cloud infrastructures (AWS and Azure) and legacy systems (LDAP and Active Directory), I developed automation for the university community and especially on the topic of identity management.

Technologies:

- Python
- Docker
- Kubernetes
- Ansible
- Vagrant
- Terraform
- VMWare
- AWS
 - EC2
 - EKS
 - ECR
 - Cloudformation
 - CodeCommit/CodeBuild/CodeDeploy
 - AWS SDK
 - AWS CLI

Notable achievements:

- Deployment of Grouper by Internet2
 - Working closely with Identity Management group to implement migrations and automation to improve and replace legacy group and permission management.
- Development and Deployment of LDAP Reporting in the service Gossamer
 - Custom UI and API solution for LDAP reporting
 - Designed, Developed and demoed PoC to final Deployment
 - Designed as microservice
 - Containerized with Docker
 - Deployed to Kubernetes
 - Python using Tornado and Pandas
 - JWT Authentication
 - VueJS UI
- Handled ad-hoc needs for reporting in LDAP and Active Directory, using homegrown databases for such things as mail routing
 - Used this early experience to design the SaaS Gossamer for UVA

Starting in September of 2019 in a “contract to hire” scenario, using the staffing company, Apex, I was slated to become full-time, but the unforeseen pandemic caused a hiring freeze at the University and I was unable to continue the onboarding process.

Currently scheduled for June 10th 2020 to take the AWS Certified Cloud Practitioner exam (will updated potential employers).

Co-founder, Partner, Board member, CTO and CIO, Director of Product Development
Legal Science, LLC
Philadelphia, PA

2015 - 2019

Legal technology startup specializing in policy surveillance, legal epidemiology, custom datasets, SAAS knowledge management and workflow solutions.

I am a co-founder and partner and a member of the board. I supervised engineers, sales staff, legal experts and lawyers and contractors.

Technical knowledge:

- Python
 - Tornado servers for API creation and consuming data
 - Github hooks API
 - Custom API interaction with MonQcle Saas
 - Django and Flask
 - Sql and MongoDB and Neo4j data sources
 - Web Scraping with Selenium and Beautiful Soup
 - Machine Learning (Numby, Scipy, Tensorflow, Matplotlib, Pandas)
 - Jupyter Notebooks
 - Python 2 and 3
 - Wrote custom machine learning classifiers for NSF
- PHP
 - Symfony base for web frontend/backend and API
- .NET
 - C#, Azure Cloud, Core and older versions
- DevOps
 - Linux
 - Comfortable with all command line shell
 - Installed and maintained
 - Apache, Nginx, MySql, MongoDB, RabbitMQ, Elasticsearch
 - Docker (installed all products on custom images for Development and Production)
 - Jenkins CI/CD (with Docker and without)
 - Bash programming
 - Scripts for launching and manipulating custom apps
 - Scripts for health checks (PIDs, catching Term signals)
 - Kubernetes
 - Pachyderm
 - AWS Cloud

- Azure Cloud
- Google Cloud

Notable achievements:

- Prescription Drug Abuse Policy System: <http://pdaps.org/>
- LawAtlas Project: <http://lawatlas.org/>
- CityHealth: <https://www.cityhealth.org/>
- MonQcle: <https://mongcle.com/>
- National Institutes of Health (NIH) SBIR for PDAPS (Phase 1 and 2) and for DAPS/HOPE (Health Outcome Policy Evaluation) (Phase 1 and 2) and one supplement for Justice Community Opioid Innovation Network (JCOIN)
- National Science Foundation SBIR Phase 1 for machine-assisted legal epidemiology

Director of IT

Temple University — Public Health Law Research, Robert Wood Johnson National Program
Philadelphia, PA

2013 - 2015

Created legal research platform called LawAtlas (as Avialae), leading to a full time position at the Beasley School of Law. Daily maintenance of all aspects of [LawAtlas](#) — server, code, UI and design. Work with internal and external teams to create interactive maps and reports for [LawAtlas](#) and facilitate legal and public health research and legal epidemiology.

Adjunct Professor

Temple University — College of Science and Technology Philadelphia, PA

2014 - 2015

Introduction to C programming & Introduction to Python programming

Senior Software Developer

Temple University – Computer Services

Philadelphia, PA

2008 - 2013

Primary responsibilities included design and development of server code, database code, web applications and user interfaces.

Notable achievements:

- TUMail - university email portal
- TUHelp - university help desk self service portal
- Temple Computer Service Change Management system - used to run and manage all software and infrastructure changes for university

Technical Support Specialist

Temple University – School of Medicine, Admissions

Philadelphia, PA

2006 - 2007

Developed supplemental application for Medical School admissions. Integrated custom web applications with AAMCAS medical application system.

Technical Support Supervisor

Temple University – School of Medicine, Library

Philadelphia, PA

2003 - 2006

Oversee technical services for Library, including OCLC coding, periodicals checkin and management of technical services employees. Developed a library statistics counter web application for branches. Developed main medical library home page.

Education

Virginia Commonwealth University

1994

Richmond, Virginia B.A.,
Music Performance