

JEREMY GERARD

Machine Learning Engineer



SKILLS

Python 5+ yrs

Applied Data Science 5+ yrs

Cloud Engineering 5+ yrs

MLOps 5+ yrs

Docker / Kubernetes 3+ yrs

Robotics 3+ yrs



EDUCATION

2008 - 2011

Bachelor's Degree in
Neuroscience & Mathematics
Temple University



CONTACT

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CERTIFICATIONS

LPIC 1 - Linux administrator

Certificate issued by the Linux Professional Institute to prove abilities in Linux administration

PROFILE

Cross-disciplined technologist, developer, and machine learning engineer with a neuroscience background and a passion for learning and problem solving, seeking to further a career in applied technology. Most interested in a role which demands and cultivates a diverse range of knowledge and technical aptitude, adaptive critical thinking, and creative solution design.



WORK EXPERIENCE

Machine Learning Engineer Clearview AI

2022 - 2023

- Architected and implemented company-wide MLOps strategy
- Used ChatGPT for entity extraction from metadata
- Built and deployed multiple cutting-edge computer vision models for presentation attack detection and identity verification
- Standardized production ecosystem across machine learning frameworks, architecture and deployment, including unit testing and model optimization for CPU and GPU
- Delivered image enhancement and exposure correction algorithms used by investigators to assist in facial recognition from poor-quality photos

Lead Developer, Emerging Technology Tyson Foods

2018 - 2022

Successfully architected and led the successful development and deployment of a diverse range of projects and solutions around ML, CV, hyperspectral imaging, IoT, robotics - most of which were recognized company-wide for their success in integrating new technologies into the business for the first time, and enabling unprecedented improvements in business operations through data and automation

- Spearheaded the architecture, development, and implementation of two separate end-to-end MLOps pipelines in AWS to autonomously handle image collection from edge to cloud, image annotation and curation, model training and evaluation, and model deployment back to the edge
- Listed as a principal inventor on a pending patent for the design and architecture of a novel solution which autonomously measures internal temperature of cooked food products using a robotic arm, a 3D linescan camera, and an infrared camera
- Acted as data science lead for company-wide COVID-19 response effort. Devised forecasting, risk evaluation, and transmission rate factors models and personally developed a NRT-interactive dashboard and front-end used by Tyson's ELT

Technologies include:

IBM InfoSphere Advanced DataStage Essentials

Intense course about the ETL technologies and the use of IBM DataStage.

Jump Start Program

Two months full-time training in object oriented programming in Java SE/EE, software development, testing and modern enterprise web-frameworks. Other topics were object oriented design patterns, test-driven development, SQL-databases and webserver in Java environment (Tomcat / Glasfish / JBoss / Jetty)

Online Classes

It is important for me to stay up to date with the newest topics in the field of IT. In DevOps it is also important to have a general overview and a hands-on experience on them. Therefore, besides intense article studies, I also keep myself up to date with online classes.

- Python for custom tool development
- Ansible for infrastructure migration and cloud configuration
- SLES12
- Django for Visualization

Achievements include:

- Ansible module for SLES12 System + Package registration
- Python tool for ACL-administration in cloud
- Fully automated migration of old systems into cloud with Ansible playbooks/roles
- Django tool on LDAP - Schema Review

Systems Analyst Research and Development

Mar 14 - Jan 15

Responsible for infrastructure architecture / automaton as well as custom tool development on a project for directory services and identity / access management in a large heterogeneous environment.

- Design and implementation of update and deployment process automation
- Quality assurance by design of infrastructure monitoring, centralized logging solutions and documentation
- Customized tool creation for ldap operations
- Installation and maintenance of single sign on solutions
- Customer support in ldap / infrastructural / programming concerns

Technologies include:

- Ansible for infrastructure automaton and configuration management
- Python for custom Tool development
- nxLog + rsyslog + graylog for logging infrastructure
- NOVELL eDirectory
- Shibboleth as identity Provider combined with ldap
- SLES11
- Git for configuration and documentation versioning

Achievements include:

- Drastically accelerated (20x faster) the update process and improved its reliability by introduction of centralized configuration management
- Extended the python-ldap library with interfaces for simplified access and modification of LDAP-Objects and searches
- Introduction of a complete and reliable centralized logging solution including log filtering and alerting for both windows and Linux systems



Systems Analyst

Tourism industry

Sep 13 - Mar 14

Responsible for data transformation and tool customization on a migration (legacy c++ code from Solaris to Linux systems) project. The tasks include

- Tool development for identification of critical spots in code
- Legacy code analysis
- Quality assurance
- Department-wide training in python
- Consulting in topics of migration to Git

Technologies include:

- Python
- Git
- Linux (Debian)

Achievements include:

- Implementing code coverage and dynamic code checker for c++ legacy source code based on gcov
- Introduction of Python + Environment in project

Systems Analyst

Tourism industry

Oct 12 - Sep 13

Responsible for the infrastructure including performance and quality assurance on a large social media project.

- Organization and care of a cloud network (Debian systems)
- Support for software developers
- Configuration of open source tools for code quality and documentation
- Implementation of performance checks
- Implementation of automated reports on code quality and performance

Technologies include:

- Python + Django for tool development
- Sonar as static and dynamic tool for code analysis
- OpenLDAP for user rights management
- JIRA as the issue tracking/SCRUM tool

Achievements include:

- Customized wiki and documentation application for developers with Jenkins and Git integration



- Django web application to test the product performance using selenium tests in background with customizable tests / test environments and a graphical evaluation using the jqPlot library (also Jaiascript / jQuery)
- Improvement of the overall code quality by raising test coverage (+ 30%) and identification + elimination of potential code flaws

IT Consultant

Oct 11 - Oct 12

Accenture Tech. Solutions

Large public service project with the goal to establish a platform for handling of finance processes with a very high number of transactions. Main focus was the migration of legacy data, by assuring data quality and transformation into various formats

- Customer consulting with regard to loading / unloading interfaces
- Definition of requirements for transformation of legacy data
- Implementation of algorithms for data transformation
- Tool development for secure data transport
- Tool development for tests of data quality/interface implementation

Technologies include:

- Standard Linux tools, such as awk, sed, grep, ...
- Python for in-depth data analysis
- Java for transport layers
- IBM DataStage

Achievements include:

- Definition of uniform standards
- Introduction of the standard Linux stack as global toolset for data analysis in project