



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

CONTACT

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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.

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 factor models and personally developed a NRT-interactive dashboard and front-end used by Tyson's ELT

EDUCATION

2009 - 2011

M. Sc. Physics.
Universität Bonn

CERTIFICATIONS

LPIC 1 - Linux administrator

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

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 web servers 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.

Technologies include:

- 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 Javascript / jQuery)
- Improvement of the overall code quality by raising test coverage (+ 30%) and identification + elimination of potential code flaws

IT Consultant

Accenture Tech. Solutions

Oct 11 - Oct 12

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

