

## **Professional Summary**

*Software Engineer with five years of specialized experience in CV, ML modeling, and MLOps. Expertise spans cloud infrastructure (AWS, GCP, etc.), advanced data pipelines, MLOps frameworks, and API integration. Proven track record of building and managing end-to-end projects, delivering innovative solutions, and collaborating with cross-functional teams. Experience designing, deploying, and optimizing data solutions and ML models.*

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**Programming Languages:** Python, SQL, Bash Scripting

**Machine Learning Tools:** PyTorch, TensorFlow, HuggingFace, scikit-learn, OpenCV, Keras

**Data Engineering:** PySpark, ETL Pipelines, Data Lakes/Warehouses

**Cloud Technologies:** GCP, AWS (ECS, EFS, S3, SageMaker, Lambda, IAM), Terraform (IaC)

**DevOps & MLOps:** Docker, Kubernetes, CI/CD (GitHub Actions, BitBucket Pipelines), MLflow

**Networking:** VPN, DNS, TCP/IP, HTTPS, VPC

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## **Work Experience**

### **Data Science Manager**

Remitz, Inc. Englewood, OH (Sept 2024 - Present)

- Led and managed the data science team, overseeing the design, development, and deployment of advanced machine learning models, including LLMs and Computer Vision models, contributing to a significant increase in revenue opportunity.
- Developed and executed data-driven strategies, guiding engineers through the process of translating large and complex datasets into usable information.
- Spearheaded the creation of data pipelines, enabling the processing and analysis of large-scale, unstructured datasets for cross-departmental insights.
- Improved model performance by designing and implementing automated feature engineering processes, reducing preprocessing time and boosting operational efficiency.
- Directed end-to-end data research initiatives, ensuring alignment with stakeholder objectives..
- Conducted statistical analysis, A/B testing and hypothesis testing, utilizing cutting-edge AI and data science methods to uncover actionable insights and improve model performance.

### **InfraOps Manager**

Remitz, Inc. (a Xenomics startup), Englewood, OH (Jan 2024- Sept 2024)

- Directed the conversion of a 22,000 sq/ft warehouse into a fully operational data center
- Implemented MLFlow framework and establish company protocols for data science

- *Integrated real-time inference APIs for rapid production model deployment, improving accuracy through optimized data preparation, annotation, and rigorous statistical testing (t-tests, A/B tests).*
- *Designed and engineered scalable solutions to seamlessly integrate ML models into production environments.*
- *Implemented a hybrid cloud infrastructure using Terraform (AWS) and Harvester (on-prem), enhancing flexibility, operational efficiency, and cost-effectiveness.*

### **Lead ML Engineer**

*Remitz, Inc. (a Xenomics startup), Englewood, OH (Feb 2023 - Jan 2024)*

- *Accelerated development cycles by designing and deploying web applications with Django, while automating CI/CD pipelines using AWS CodePipeline.*
- *Developed and secured high-performance API services with Flask and Nginx, ensuring seamless and reliable data exchange.*
- *Optimized database performance across MongoDB, CassandraDB, and PostgreSQL, reducing query execution times and accelerating project timelines.*
- *Implemented scalable Amazon S3 storage solutions to improve data availability, durability, and accessibility for critical research initiatives.*

### **Machine Learning Engineer**

*Xenomics (parent company of Remitz), Englewood, OH (Aug 2022 - Feb 2023)*

- *Fine-tuned open source models and created custom models for generative AI used in domain specific document generation.*
- *Developed and secured API services with Flask and Nginx.*
- *Optimized database performance across MongoDB, and PostgreSQL*
- *Implemented scalable Amazon S3 storage solutions to improve data availability, durability, and accessibility for critical research initiatives.*
- *Researched and applied ML applications to protein fold prediction and representation generation.*

### **Machine Learning Engineering Specialist**

*Valley Tech Systems, Inc., Dayton, OH (Jan 2022 - Aug 2022)*

- *Conducted research and development of advanced image classification models using PyTorch, achieving high-accuracy image analysis for mission-critical applications.*
- *Deployed and automated machine learning workflows, integrating models into scalable production systems to enhance operational efficiency.*
- *Optimized ETL pipelines to streamline data ingestion, preprocessing, and transformation, ensuring high-quality inputs for machine learning models.*
- *Integrated machine learning solutions with ROS2, enabling autonomous decision-making capabilities in remote and mobile systems.*

### **Machine Learning Research Assistant**

*Miami University, Oxford, OH (Jan 2021 - Aug 2021)*

- *Conducted research on computer vision applications, specializing in depth perception, object detection, and instance segmentation of plants in noisy environments.*
- *Designed and implemented scalable data ingestion and processing pipelines, optimizing workflows for machine learning models.*
- *Built and managed data annotation workflows using AWS Mechanical Turk, ensuring high-quality labeled datasets for training computer vision models.*
- *Delivered comprehensive presentations on research findings to diverse academic and professional stakeholders.*
- *Collaborated with cross-disciplinary teams to translate research insights into practical machine learning solutions.*

### **General Contractor**

*Self-Employed (Oct 2012 – Jan 2021)*

- *Lead end-to-end property acquisitions, renovations, and sales of commercial and residential real estate.*
- *Oversaw budget management, negotiate contracts with subcontractors and vendors, and ensure compliance with local building codes and regulations.*
- *Manage project timelines, allocate resources, and maintain quality standards to meet or exceed project milestones.*
- *Conduct comprehensive market analyses and property valuations to identify high-potential investments.*
- *Build and sustain strong relationships with vendors, streamlining operational workflows and enhancing project efficiency.*
- *Demonstrate leadership, decision-making, and financial acumen across all phases of property development, delivering high-quality results on time and within budget.*

### **Defense Contractor**

*DynCorp International, Kandahar, Afghanistan (Nov 2010 - Oct 2011)*

- *Assisted in Forward Operating Base (FOB) establishment.*
- *Installed and troubleshoot satellite network internet, wifi and in ground fiber-optic cable and establishing network for all base facilities*
- *Heavy equipment operation during construction of perimeter walls, hardened shelters, and landing pads.*
- *Provided fire protection services: Installed fire alarms and fire extinguishers on all facilities and in critical areas of the base. Operated water and rescue trucks and acted as first responder in emergency situations.*
- *Coordinated directly with base leadership to align operations with mission requirements.*

### **Physicians Assistant**

*Missouri River Health Care, Great Falls, MT (Nov 2010 - Oct 2011)*

- Handled patient PHI with HIPPA standards of privacy and security.
- Collected patient data via EKG and EEG devices.
- Provided patient intake, collected and recorded vitals, chief complaints and

### **Defense Contractor - Firefighter**

*Combat Support Associates, Ali Al Salem Air Base, Kuwait (Nov 2008 - Oct 2009)*

- Fire protection and emergency services for US and NATO military bases across Kuwait.
- Vehicle extrication and emergency medical services.
- Perform fire safety inspections for base facilities, maintain detailed records and pre-fire plans.

### **USAF Enlisted Firefighter**

*United States Air Force, Malmstrom AFB, MT (May 2002 - Aug 2007)*

- Five year winner of the outstanding unit award.
  - Managed firefighting crews and coordinated emergency response logistics, ensuring strict adherence to safety, security protocols, and operational efficiency under Top Secret clearance.
  - Supervised, trained, mentored, and evaluated team members on duties and upgrade training.
  - Developed advanced resource management, communication, and decision-making skills to achieve mission objectives within strict time constraints.
  - Demonstrated leadership in emergency operations, consistently meeting and exceeding performance standards in dynamic and challenging environments.
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## **Education**

### **Master of Science in Computer Science**

*Miami University, Oxford, OH (2021 - 2023)*

- *Research focus: Machine Learning using Computer Vision and Signal Processing.*
- *Key coursework: Network Security, Ethical Hacking, and Artificial Intelligence.*

### **Bachelor of Science in Computer Science**

*Miami University, Oxford, OH (2017 - 2021)*

- *Focus on foundational computing principles, Data Structures, Databases, and Software Development.*

- *Lead multiple interdisciplinary teams in the hardware and software development of a complete robotic product.*

## ***Publications***

- ***Curriculum-Based Learning for Automatic Modulation Classification***  
*ProQuest Dissertations Publishing, Miami University (2023)*
    - *Explored innovative approaches to automatic modulation classification using machine learning techniques.*
  - ***A Study on Brute Force Attack on T-Mobile Leading to SIM-Hijacking and Identity-Theft***  
*2022 IEEE World AI IoT Congress*
    - *Investigated cybersecurity vulnerabilities, proposing countermeasures to mitigate risks in telecom infrastructure.*
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## ***Military Experience***

### ***USAF Enlisted Firefighter***

*Malmstrom AFB, MT (2002 - 2007)*

- ***Held Top Secret Security Clearance***, supervising emergency operations and managing firefighting teams from 2004-2007.
- ***Certifications***: Fire Instructor II, Fire Officer II, Fire Inspector II, Hazardous Materials Technician, Rescue Technician.
- ***Leadership Honors***: Awarded the prestigious John Levitow Award for exemplary performance in leadership and academic excellence.
- ***Military Honors***: AF Outstanding Unit Award (4x), AF Longevity Service Award, National Defense Service Medal, Global War on Terrorism Expeditionary and Service Medals, NCO Professional Military Education Ribbon.