Luciana Cendon

AI | Machine Learning | Data Science | Computer Vision | Deep Learning | MLOps

CONTACT

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- US Citizen

EDUCATION

CALIFORNIA INSTITUTE OF TECHNOLOGY (CALTECH)
MS in Electrical Engineering
Pasadena, CA
June 2016

ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL)
GRENOBLE INSTITUTE OF TECHNOLOGY (GRENOBLE INP)
POLITECNICO DI TORINO
MS in Micro and Nanotech for Integrated Systems
Lausanne, Switzerland
Grenoble, France · Turin, Italy
March 2014

POLITECNICO DI TORINO
BS in Electronics Engineering
Turin, Italy
March 2012

SKILLS

CLOUD PLATFORMS & TOOLS
Amazon AWS: EC2 · S3 · RDS
Lambda · Redis · SageMaker
CloudWatch
Tools: FAISS · PostgreSQL
Docker · VSCode · Pinecone

ML & DATA SCIENCE
Algorithms & Techniques: MLOps
ML Algorithms · Deep Learning
Data Analysis · Generative Models
LLMs · LangChain · Deployment
Libraries: TensorFlow · PyTorch
Hugging Face · Scikit-learn · ONNX
XGBoost · LightGBM · Torchscript
Pandas · OpenCV · etc.

SOFTWARE DEVELOPMENT
Backend & Web Development:
FastAPI · Flask · Next.js · API Design
Cloud Architecture · CI/CD · OOP
Programming Languages: Python
C++ · JavaScript · SQL · HTML/CSS

ADAPTABILITY
Committed to learning and adopting new tools, frameworks, and technologies as needed to meet project requirements and deliver impactful solutions.

SOFT SKILLS
Collaboration · Communication
Problem-solving · Critical Thinking
Adaptability · Attention to Detail
Time Management

LANGUAGES SPOKEN
English · Italian · Portuguese

OTHER

Ocean Worlds Life Surveyor Project:
ml.jpl.nasa.gov/autonomies/owls.html
ARIA Project:
aria.jpl.nasa.gov/about.html
Patents:
Patent No: 20170214083

WORK EXPERIENCE

INDEPENDENT AI SPECIALIST | Consultant | Founder
July 2024 - Present | Los Angeles, CA

- Designing and developing a stealth SaaS platform leveraging AI, encompassing the entire system architecture, including scalable cloud integration, backend development, and algorithm design using computer vision, NLP, and LLMs.
- Exploring and implementing AI-driven solutions for enterprise applications, including workflow automation and scalable AI systems, ensuring efficiency and adaptability in real-world deployments.
- Collaborated with startups on freelance projects, delivering tailored solutions to resolve technical challenges and enhance system capabilities.
- Gained hands-on experience in MLOps practices, including cloud-based architectures, data pipeline creation, and machine learning deployment, ensuring systems are robust, reliable, and production-ready.

QUIET MACHINES | Senior Computer Vision/Robotics Engineer
Nov 2022 - May 2024 | Pasadena, CA

- Designed and implemented the complete computer vision pipeline, serving as the company's sole computer vision engineer
- Implemented automated control for Pan-Tilt-Zoom cameras using PID controller mechanisms and advanced computer vision signals
- Created meticulously curated datasets for object detection and image segmentation, overseeing the entire process of data annotation
- Designed and trained models for image segmentation as well as scene understanding within video contexts and tracking (Unet++, LSTM)
- Optimized deep learning models for precision and speed and integrated them into the prototype system in C++, with real-time inference performance
- Developed and integrated the frontend with the backend through Web-Sockets for seamless communication
- Conducted field tests and built data analysis tools to evaluate system performance.

JET PROPULSION LABORATORY | Data Scientist & Software Engineer
Nov 2019 - Nov 2022 | Pasadena, CA

- JPL Internal
  - Data Analysis of JPL resource utilization to understand and motivate business decisions
  - Dashboard creation in Power BI to visualize and communicate data insights, with automated data refresh and dashboard update
- Darpa LwLL and D3M Project:
  - Worked extensively with Machine Learning pipelines and software systems in Python
  - Performed data analysis and data visualization dashboard of performer results from machine learning competition
- ARIA Project (NASA):
  - Developed and Implemented methods for volcano anomaly detection using spatio-temporal time series data and LSTMs
- Ocean Worlds Life Surveyor (OWLS) Project (NASA):
  - Wrote Data Simulator system able to generate synthetic Digital Hologram images along with labelled bacteria positions, for both Data Augmentation and Pipeline Validation purposes
  - Wrote software for automated Peak Detection in time-series data from Mass Spectrometer, with highly variant levels of noise: from algorithm design to software productization and delivery to customer

CALIFORNIA INSTITUTE OF TECHNOLOGY | Research Engineer
Jan 2019 - Oct 2019 | Pasadena, CA

- Developed, trained, and deployed detection and pose estimation models on AWS SageMaker, as part of an automated system for behavior analysis in socially interacting mice, enabling scalable cloud-based processing and inference
- Imitation Learning for Automated Video Editing (Designed and Implemented whole pipeline)
  See Page: sites.google.com/view/smooth-imitation-learning/home

OBEN ARTIFICIAL INTELLIGENCE | Research Engineer
Dec 2017 – Jan 2019 | Pasadena, CA

- Delivered Gaze Tracking software in C++ using Ensemble of Regression Trees for Personal Avatar Eye animation
- Delivered software for extraction of Lighting Information from Facial Textures using augmented Spherical Harmonics and Least-Squares
- Delivered Active Appearance Model software for Automated Lip Animation of Personal Avatars
- Designed general purpose & extensible chat system: adaptable to new personalities, maintains state across conversation
- Delivered Q&A chat software - basis of company initiative in mobile health

HRL LABORATORIES | Research Engineer
Oct 2016 – Nov 2017 | Malibu, CA

- Data Analysis and Predictive Modeling for Well Optimization
- Reinforcement Learning for Autonomous Airplane Flight
- Low-Power Image Recognition

CALIFORNIA INSTITUTE OF TECHNOLOGY | Research Engineer
June 2016 – Sept 2016 | Pasadena, CA

- Analyzed behavior in time-series data for research applications