

Andrew J Higgins

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I am seeking employment as a data scientist, analyst, or engineer at a company that values the names and faces behind the numbers. Before completing a Master of Information and Data Science at UC Berkeley, I began a career as an Additive Manufacturing Engineer at Visser Precision LLC. I then quickly rose to become Department Manager of all Metal 3D Printing operations. I received a BS Mechanical Engineering at the University of Denver, during which I worked a couple of full-time Mechanical Engineering internships.

Graduate Education

Master of Information and Data Science, UC Berkeley

Remote — Sep 2022 - April 2024

- Project-backed experience with Python, modern deep learning architectures, pipeline engineering infrastructures, statistical analysis, experimental design, and data communication
- Final Capstone Project: SkinScreen - a computer vision, ML web app for classifying user skin conditions
 - Role: full-stack engineer and data scientist using industry-standard tools
 - AWS (S3, SageMaker, Lightsail, IAM), Tensorflow, Python FastAPI, HTML/CSS
 - Image classification using transfer learning (ImageNet, ResNet, VGGNet, EfficientNet)
- Natural Language Processing course - learned function and origins of modern NLP architectures
 - RNNs, LSTMs, transformers, tokenization, embedding, benchmarking
 - Most-used architectures: GPT, BERT, T5
- Computer Vision course - Learned linear algebra and Python techniques for image transformation, space/frequency analysis, and deep learning classification & recognition
 - Image feature extraction (CNN, HOG, edge detection), dimensionality reduction (PCA, tSNE), classification (regression, SVM, k-means clustering)
- Machine Learning Systems Engineering course - Built and stress-tested a ML model API endpoint with caching, horizontal autoscaling, and performance metrics tracking
 - Docker, Kubernetes, Redis, MS Azure, Grafana, Istio
- Data Visualization course - Learned best practices for transforming, displaying, and communicating data
 - Tableau, Python Altair, D3.js

Mechanical Engineering Experience

Metal Additive Manufacturing Department Manager, Visser Precision

Denver, CO — May 2020 - Feb 2022

- Hired, continuously train, & manage a team of four employees
- Oversee additive manufacturing production projects start-to-finish
- Serve aerospace, auto racing, & medical device markets
- Quote potential work, field AM applications inquiries, communicate daily with customers & partners
- Practice continuous process improvement within AS9100, ISO9001, & ISO13485 quality management system
- Form & improve working relationships with industry partners such as EOS, Elementum3D, Ursa Major Tech
- Increased average monthly revenue month over month

Additive Engineer, Visser Precision

Denver, CO — Nov 2019 - May 2020

- CAD of support structures for 3D printed parts with Solidworks, Materialize Magics, & EOS softwares
- Developed & documented operating procedures for production
- Used Design of Experiments methodology to develop process parameters for various printed metals

Senior Design Project, Folsom Custom Skis

University of Denver, CO — 2018-19 academic year

- Delivered a quality control workstation capable of measuring mechanical properties of a ski
- CAD in SolidWorks; actuators & sensors controlled by Arduino microprocessor; programmed using C

Mechanical Engineering Intern, Killark Division, Hubbell Inc.

Saint Louis, MO — Summer 2018

- Designed & built Ingress Protection (IPX9) test station for product development lab

Engineering Change Coordinator, IMI Precision Engineering

Littleton, CO — Aug 2016 - Aug 2017

- Coordinated interdepartmental Engineering Change Orders for Littleton, CO & Queretaro, Mexico factories
 - Increased monthly on-time change completion from 43% to 80%; reduced backlog by 84%

Undergraduate Education

BS Mechanical Engineering, University of Denver

Denver, CO — Sep 2014 - May 2019

- Minors of study in Spanish language, Mathematics, & Physics
- Tau Beta Pi Engineering Honors Society
- Studied abroad in Seville, Spain at Universidad de Sevilla, Fall 2018

Other Accomplishments and Experience

- El Camino de Santiago, French Way; 535 miles backpacking, 33 days, summer 2019
- Risk Manager of Lambda Chi Alpha fraternity, 2015-2016
- Captain of high school ski team & achieved 6th place in US Rowing Youth National Championship, 2014
- Volunteer & student in Costa Rica, summer 2013
- Experience using: MS Office, JobBoss ERP, SolidWorks PDM Vault, Autodesk Inventor, Matlab, ANSYS, LabVIEW, ImageJ, Materialise Magics, EOS softwares