

## SUMMARY

I am a motivated and aspiring **Machine Learning Engineer/Data Scientist**, changing careers after a decade in the construction field. I am proficient in creating end-to-end models from creating/cleaning data to training/shipping models. I am fluent in Python and SQL.

## EDUCATION

**M.S. in Computer Science – George Mason University** **Fairfax, VA (Aug 2022 – May 2023)**  
**Machine Learning Concentration**

GPA: 3.62/4.0, Cum Laude

Relevant Coursework: Deep Learning, Computer Vision, Machine Learning, Data Mining, Artificial Intelligence, Cryptography

**B.S. in Computer Science – George Mason University** **Fairfax, VA (Aug 2019 – May 2022)**

GPA: 3.54/4.0, Cum Laude

Relevant Coursework: Software Engineering, Data Structures & Algorithms, Databases, Operating Systems, Compilers

## EXPERIENCE

**Fire Sprinkler Systems Surveyor – Akers Fire Protection** **Lorton, VA (Jul 2013 - Present)**

- Responsible for all construction surveys and coordination with contractors and project managers with survey schedules and logistics
- Developed file converter tool that instantly converts PDF surveys into AutoCAD files which reduced a one hour process to one second
- Created survey scheduler program that parsed emails and generated survey schedules and timesheets
- Developed fire sprinkler classifier used to instantly and accurately identify sprinkler head models
- Technologies: PDFMiner, ezdxf, openpyxl, Transformers, PyTorch

**Technical Co-Founder – Vision Fitness LLC** **Centreville, VA (Jun 2017 – Jan 2018)**

- Co-founded online fitness platform (SaaS); developed beta version that algorithmically connected members with personal trainers
- Led door-to-door marketing campaign to acquire and onboard personal trainers tripling total trainer count
- Boosted member acquisition by over 300% by upgrading payment portal to use Stripe
- Organized marketing events to raise product awareness and merchandize branded goods; each event doubled new member count
- Technologies: Flask, SQLAlchemy, Stripe API, Google Analytics, Bootstrap, Python

**Technical Co-founder – URIZIB** **Fairfax, VA (Jun 2016 – Jun 2017)**

- Co-founded online community platform for overseas Koreans; developed a marketplace, news aggregator, and coupon aggregator
- Led marketing team to procure coupon discounts from 100+ local Korean businesses
- Developed scrapers that populated the site with real-time Korean news which doubled daily active user count
- Overhauled UI/UX with Bootstrap and JavaScript which increased user retention by 200%
- Technologies: Django, PostgreSQL, Amazon Web Services (AWS), Google Analytics, Bootstrap, Python

**Webmaster – Akasaka Japanese Steakhouse** **Manassas, VA (Apr 2016 – Sep 2017)**

- Rebuilt website from scratch using Django and SQLite
- Responsible for updating the website with seasonal deals and menu items and maintaining up-time
- Launched email marketing campaigns with MailChimp; ~10 sign-ups in first week
- Technologies: Django, SQLite, Bootstrap, Python

## PROJECTS

**Fire Sprinkler Classifier**

- Collected and cleaned 2+ years of sprinkler images; 342 images, 12 classes
- Trained image classification models by fine-tuning pre-trained Vision Transformer (Vit) and ResNet152 models
- Achieved 91.26% and 91.09% accuracy, respectively
- Technologies: Hugging Face, Vision Transformer, CNN, PyTorch

**YouTube Sponsor Blocker**

- Performed Text Segmentation on YouTube transcripts to isolate sponsor ad segments to skip during video playback
- Trained Text Segmentation models by fine-tuning pre-trained transformer models (BERT, RoBERTa, XLNET, XLM\_RoBERTa)
- Achieved 61.3% accuracy with RoBERTa
- Technologies: Hugging Face, Transformer, NLP, PyTorch, youtube-transcript-api, Google Cloud Platform (GCP)

**Stroke Data Analysis: Medical vs. Lifestyle**

- Compared models trained on medical features (e.g. age, BMI, gender) vs. lifestyle features (e.g. smoking status, ever married)
- Medical-feature model outperformed lifestyle-feature model
- Achieved 91% and 81% accuracy, respectively
- Technologies: PyTorch, scikit-learn, seaborn