

# Bowen Yi

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## EDUCATION

**The University of Michigan**, Ann Arbor, MI

Expected Dec. 2024

*Bachelor of Science in Computer Science*

- GPA: 3.83, with University Honors
- Related Coursework: Intro to Machine Learning, Natural Language Processing (NLP), Human-Centered Machine Learning, Information Retrieval, Computer Vision
- Research Interests: NLP, Computational Social Science, Affective Computing, Machine Learning

## SKILLS

- Proficiency in Python, C++, C, Java, scikit-learn, PyTorch
- Experience in TensorFlow, Git, JavaScript, R, MATLAB, Azure

## EXPERIENCE

**University of Michigan**, Ann Arbor, MI

Aug. 2023 - Present

*Research Assistant, Podcast Project with CSE Prof. David Jurgens*

- Research the conversational dynamics, narrative styles, and latent preference within over one million podcasts, utilizing advanced Natural Language Processing and Machine Learning techniques
- Initiate comprehensive pipelines for data cleansing, topic modeling, and result interpretation on podcasts
- Design, tune models that distinguish news and political content from non-news and non-political podcasts

**University of California - San Diego**, La Jolla, CA

Sep. 2022 - Nov. 2022

*Research Assistant, Twitter Project with CSE Prof. Imani Munyaka*

- Developed a Python program to extract tweets of California senators using Beautiful Soup and Tweepy
- Researched R language to visualize data and analyze the political landscape in California

## PROJECTS

**Prime Video Reviews Classifier** | *Natural language Processing, Sentiment Analysis, scikit-learn, NLTK*

- Trained support vector machines and Word2Vec models to classify more than one million movie reviews into three possible sentiments, achieving 85%+ accuracy on the testing dataset
- Researched and exhaustively reported feature engineering and hyperparameter tuning for classifier design

**Tourist Attractions Classifier** | *Computer Vision, Supervised Deep Learning, Python*

- Designed and implemented a multilevel Resnet model, achieving 99% AUROC on classifying tourist attractions on the testing dataset
- Researched and applied transfer learning and data augmentation to improve the model robustness

**Piazza Posts Classifier** | *Supervised Learning, C++*

- Created a Bernoulli naive Bayes Classifier on 10000+ Piazza posts and predicted topics of input posts, with 91% accuracy
- Provided a custom implementation of the underlying tree-based map data structure

**Image Carving Program** | *Computer Vision, C++, C*

- Implemented a content-aware seam carving algorithm to resize PPM images without distortion
- Managed dynamic memory and matrices, accomplishing a resizing accuracy rate of 98.7%

## LEADERSHIP & COMMUNITY INVOLVEMENT

**Professional Events Leader, ACM @ UC San Diego**

Sep. 2022 - Dec. 2022

- Initiated 5+ resume-editing and networking events with 200+ attendees for UCSD's ACM chapter

**Volunteer College Application Tutor, Self-Employed**

Nov. 2021 - Present

- Guided 10+ domestic and international high school students from underprivileged backgrounds on the college application process and brainstormed 50+ college essays