YASH **JAKHOTIYA**

470 16th St NW, 3013, Atlanta, GA 30363

C +1-(404)-820-5409 **M** mailsforyashj@gmail.com

https://www.linkedin.com/in/yash-jakhotiya/

yashjakhotiya.github.io

EDUCATION

AUGUST 2021 – PRESENT

COMPUTER SCIENCE – MS, GEORGIA
INSTITUTE OF TECHNOLOGY, ATLANTA

- GPA 4.0/4.0.
- Specializing in machine learning and robotics.

AUGUST 2016 - JUNE 2020 COMPUTER ENGINEERING – B. TECH, COLLEGE OF ENGINEERING, PUNE

- CGPA 9.2/10.
- Minor in Financial Engineering.

WORK EXPERIENCE

MAY 2022 - JULY 2022

APPLIED SCIENTIST INTERN, AMAZON, PALO ALTO

- Worked with the Visual Search and Augmented Reality team on large-scale vision transformers.
- Improved Amazon's **Shop-the-Look** feature by utilizing high-attention patches in **image retrieval**.
- Feature is at https://www.amazon.com/stylesnap/. Team page https://www.amazon.com/visual-search/.

JANUARY 2022 - PRESENT

GRADUATE STUDENT RESEARCHER, RIPL LAB, GEORGIA TECH

- Working with Prof. Zsolt Kira on continual learning and model editing of pre-trained large language models.
- Also, a GTA for CS 4644/7643 Deep Learning class.
- Lab website https://www.cc.gatech.edu/~zk15/

JULY 2020 - JULY 2021

MEMBER TECHNICAL - QUANT SYSTEMS, D.E. SHAW, HYDERABAD

- Deployed an RBAC automation service for internal ELK (Elastic) stack as an ELK admin.
- Wrote base OCI images for firm-wide Kubernetes setup. Directly managed on-prem 3000 Linux hosts.

JUNE 2020 - AUGUST 2020

GOOGLE SUMMER OF CODE STUDENT, KUBEFLOW, GOOGLE CLOUD PLATFORM

- Kubeflow helps machine learning practitioners deploy workflows on Kubernetes in a scalable manner.
- Demonstrated efficient use of all 6 components of Kubeflow with **ml pipelines** in well-crafted notebooks.
- Details of the project can be found at https://yashjakhotiya.github.io/blog/

MAY 2019 - JULY 2019

SUMMER INTERN, D. E. SHAW, HYDERABAD

- Automated internal infrastructural alert assignments using machine learning, with features derived from natural language understanding of alert descriptions.
- Pushed to production before end of the internship, reducing the workload of an entire team by 86%.

MAY 2018 - JULY 2018

RESEARCH INTERN, INDIAN INSTITUTE OF SCIENCE, BANGALORE

- Worked on sequence-to-sequence modeling of human motion with generative adversarial networks.
- Also systematized their ml workflow. The work led to a research paper after the end of the internship.
- Lab website http://val.serc.iisc.ernet.in/valweb/

RESEARCH PUBLICATIONS

NEURIPS 2022, ANON WORKSHOP[†]

IMPROVING ASSISTIVE ROBOTICS WITH DEEP REINFORCEMENT LEARNING

Yash Jakhotiya, Iman Haque

Explored the use of an RNN policy and PPG learning to augment assistive robotics with deep RL.

NEURIPS 2022, ANON WORKSHOP[†]

ADVERSARIAL ATTACKS ON TRANSFORMERS BASED MALWARE DETECTORS

Yash Jakhotiya, Heramb Patil, Jugal Rawlani

• Showed vulnerabilities in SOTA Transformers-based malware detectors with a misclassification rate of 23.9%.

NAACL 2022, 16TH INTERNATIONAL WORKSHOP ON SEMANTIC EVALUATION IT TAKES ONE TO KNOW ONE? IDIOMATICITY DETECTION USING ZERO AND ONE SHOT LEARNING

Yash Jakhotiya*, Ashwin Pathak*, Raj Shah*, Vaibhav Kumar*

• Implemented **BERT** Relation Networks for **few-shot learning** achieving an **85%** idiomaticity detection F1 score.

[†]Under submission

SELECTED PROJECT WORK

JANUARY 2019 - DECEMBER 2021

NATURAL LANGUAGE, COMPUTER VISION, TIME SERIES MODELING, AND OPEN SOURCE

- Contributed the first-known **PyTorch** implementation of the **KSG mutual information estimator** as a regularizer to **disentangle** ResNet representation space.
- Modeled time series data with Credit Suisse India and achieved an MSE of 10^-3 on stock movement prediction.
- Extended shnupta/bric, an open-source editor with UNIX's Exuberant Ctags-based code navigation functionality.
- All project sources can be found at https://github.com/yashjakhotiya/.

APRIL 2017 - MAY 2018

ONBOARD COMPUTER SUBSYSTEM, COEP'S 2ND STUDENT SATELLITE INITIATIVE

- Created a **BCH Error Correction** module for onboard memory to counter bit flips caused by space radiation.
- The team's last satellite was launched by ISRO in June 2016, and it successfully completed its objective.
- Project website https://www.coep.org.in/csat/.

LEADERSHIP

SEPTEMBER 2019 - AUGUST 2020

INITIATING SECRETARY, ASSOCIATION OF STUDENTS OF CE AND IT, COEP

• **Founded** a common **platform** for all students to exchange knowledge, and **organized** talks, contests and tutorials on competitive coding and open-source software - https://www.coep.org.in/asci/events.html.

RELEVANT COURSEWORK

- **Georgia Tech Perfect grade** in ML with Limited Supervision research course with Prof. Judy Hoffman, Deep Reinforcement Learning for Intelligent Control, Natural Language Processing, Computer Vision, and SysML.
- College of Engineering Pune Perfect grade in Algorithms, Databases, Data Science, Computer Organization, Information Retrieval, Computer Networks, Linear Algebra, Probability and Statistics, and Theory of Computing.
- Online coursework includes Stanford's CS231n and CS224n (YouTube), and <u>Structuring Machine Learning</u>
 Projects, <u>Improving Deep Neural Networks</u> and <u>Neural Networks</u> and <u>Deep Learning</u> (Coursera).

PROFESSIONAL SKILLS

- Python (JAX, PyTorch, TensorFlow, Keras, HuggingFace, pandas, sklearn, NumPy, SciPy, Matplotlib, Seaborn, Flask), Scala, Puppet, Linux Shell Scripting, SQL, Matlab, C++ and C.
- Jupyter, Kubernetes, Docker, GCP, Kafka, ELK, Prometheus, Grafana, Jenkins, Git, Phabricator, and Confluence.
- Strong hold over Machine Learning, Data Structures, Algorithms, and System Design concepts.