# Ben Badnani

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## EDUCATION

**Boston University**

*Masters in Artificial Intelligence*                                                                                      *\*Sep. '23 – \*May. '24*
- (Accepted into the program, and expected to start by the date listed).

*Bachelor of Science in Computer Science*                                                                          *Sep. '18 – \*May. '23*
- Courses: Stochastic Processes, Real Analysis, Sketching Algorithms, Time Series, Machine Learning

## EXPERIENCE

**Boston University**                                                                                                          *Jan '23 – May. '23*

*Teaching Assistant for CAS CS 543*
- *Leading weekly discussions, office hours, and grading coursework for CAS CS 543: a graduate computer science course dealing with the analysis of sublinear algorithms.*

**Boris FX, Boston**                                                                                                          *May '22 – Oct. '22*

*Machine Learning Researcher – Python (Pytorch/Hugging Face/OpenCV/Kornia)*
- Spearheaded the machine learning department in researching and implementing deep learning solutions for open problems such as denoising images, super resolution, colorizing grayscale images, and developing a temporally consistent monocular video depth model.
- Designed and created new deep learning architectures, incorporating the research of various fields such as optimal transport, convex optimization, projective geometry, stable diffusion, and GANS.
- Met weekly with other department heads to present updates and proposals for the further development of the deep learning architectures.

**TAMID, Boston University**                                                                                              *Jan. '22 – May '22*

*Vice President, Tech Director*
- Assigning, overseeing and assisting project managers in finding internships for their teams of software engineers, developing client relations, and delivering on the proof of concept models as specified by the client companies.
- Leading weekly, hour long, sessions to get progress updates from the project managers, and work with the software engineers directly to accelerate development and stay on track to produce the company deliverable in a timely manner.

**CBS News, Boston**                                                                                                          *Sep. '21 – Dec. '21*

*Data Science Intern - Python*
- Statistical inference and correlation of broadband access with neighborhood characteristics (race composition, median income etc.) per zip code and block group, using US census datasets across a range of years.
- Used choropleth, geopandas, folium, and more to create an interactive, clickable map of Boston, with color coded popup icons that yielded demographic, monetary, and locational information about the area when clicked, per the client's request.

**Adverifai, Tel Aviv**                                                                                                        *Sep. '21 – Dec. '21*

*Machine Learning Engineer Intern – Python (Pytorch/Spacy/NLTK/Scikit-learn), Azure*
- Used computer vision, NLP, and deep neural networks to map advertisements to products with a confidence score, and predict categories for ads that were not mapped to products, in a scalable fashion.
- Improved preliminary accuracy of model from 81.62% to 86.87% on the validation set by wrapping the Pytorch neural network as a scikit object using skorch, and consequently performing a Bayesian search on selected hyper-parameters using skopt.

## SKILLS

Python (>= 2.7, incl. Cython), C (C99), Bash, SQL, R, Regex, Java, Javascript (incl. react.js).

## PROJECTS

**Bouncer - C/Python**

A sketching algorithms Python library, built in C, using the C/Python API, that allows you to approximate information about data given in the form of a stream.