

Jaydeep Borkar

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EDUCATION

University of Pune, India

June 2016 - Present

Bachelor of Engineering in Computer Engineering

EXPERIENCE

Empowerange (empowerange.org)

Ongoing

- Developed a platform to aggregate all the NGOs in the country where 1.35 billion Indian citizens can easily find them and contribute. Built a Django powered website.
- Applied Machine Learning algorithms on the country development parameters data to predict the future values to motivate the citizens in India to help and contribute to the NGOs.
- Launched it as a non-profit start-up.

MakerGhat (makerghat.org)

Jan 2019 - Present

- Contributing to a non-profit community maker-space in Mumbai with a PhD student from Stanford University. Assisting in the outreach process with the educational non-profits in the city.
- Contributing to the community repository by sharing project ideas and tutorials on different topics in Computer Science which can be helpful to the students.
- Conducted a survey in a rural school in a village near Pune to understand the problems faced by the students. The survey uncovered that students over there are facing problems with basic English, so currently exploring NLP based solutions to help them with English.

Google Assistant Actions Developer

Nov 2018 - Present

- Built two actions for Google Assistant - [Talk to My Solar System](#) (Rating 4.7) and a virtual assistant for Google Developer Group Pune – [Talk to GDG Pune](#) (Rating 5.0), available on over 500 million devices currently.
- Helping and mentoring members in the Google Assistant Actions Community with various doubts related to Actions on Google and Dialogflow.

Google Developer Group Pune & Women Techmakers Pune

Sept 2018 - Present

- Community member of Google Developer Group Pune and Women Techmakers Pune. • Assisted in organizing Google Developer Pune DevFest 2018 (second largest DevFest in India) which impacted 900+ people.
- Assisted in preparing a road-map for Women Techmakers Pune Program to maximize women participation in tech events. Contributed in building an open-source website (<http://wtm-oss.github.io>) and built a virtual assistant ([Talk to GDG Pune](#), which has around 5700 user sessions per month) for GDG and WTM Pune to increase the outreach of the community.

Software Engineering Intern, Frugal Testing, Hyderabad, India

Summer 2018

Assisted in building a proxy recorder technology to easily record and create JMeter test scenarios for web app without needing to install any additional software on computer.

Tensvect (<https://tensvect.github.io/Learning/>)

Made a GitHub organization with different repositories on courses in Computer Science, hackathons and competitions, scholarships, communities and events, internships, etc to help and guide juniors. It helped 1000+ students in our college.

ACCEPTED POSTERS

[AI, why you ain't fair? : Understanding Biases in AI, PyCon India 2019](#)

RESEARCH WORK

Reading Comprehension Systems on SQuAD 2.0, independently guided research

Aug 2019 - Present

- Researching and building state-of-the-art Reading Comprehension system that has a true understanding of the language and performs better on [The Stanford Question Answering Dataset \(SQuAD 2.0\)](#). With reference to the work <https://arxiv.org/pdf/1806.03822.pdf>
- Currently experimenting with models based on BiDAF.

- Simultaneously, exploring adversarial examples in Machine Learning and ways to make models robust to different kinds of adversarial attacks without compromising the standard accuracy, as models trained on adversarial examples were reported of compromising the accuracy on standard examples.
- With reference to the work <https://arxiv.org/pdf/1707.07328.pdf>, [Adversarial Training can Hurt Generalization](#).

Mitigating AI Bias, independently guided research

Aug 2019 – Present

- Researching methods and generalized pre-processing algorithms to reduce the dependency of AI systems on the biased features in the dataset to mitigate the bias in AI systems while making decisions.
- [Optimized Pre-Processing for Discrimination Prevention](#) work by IBM Research AI implements pre-processing algorithm only for specific datasets (Compas, German credit scoring, Adult census income), reference: [AI Fairness 360 Toolkit](#). So currently I'm studying if we can generalize this pre-processing algorithm for every dataset.

PROJECTS

Safe Search Browser Extension for Kids

Ongoing

- Building a browser extension for safe search for kids with customized parental control and a parental control application to monitor online and offline activities of kid's device.
- The extension will try to provide the safe search in all the 22 Indian regional languages apart from English.
- This extension will make the internet truly safe for around 440 million kids in India with different linguistic abilities.

Air Pollution Forecast App

Dec 2018

- Built an Air Pollution Forecast App to predict a week-long AQI (Air Quality Index) forecast with the motivation to help 67 million citizens in Delhi, Bangalore, and Mumbai, with serious health problems by giving prior idea about when to avoid going out in case of extremely poor air quality.
- Displayed necessary measures for citizens to reduce air pollution - [Project link](#)

Project Typometer, IIT Kharagpur, Kharagpur Open Source Society

Dec 2017

Built a cross platform application built on QT for measuring typing speed - [Project link](#)

Project Smart Car Parking, [PTC Inc.](#)

Aug 2017

Built a product to detect available parking space in a two-day workshop, a clone of [Project link](#)

OPEN-SOURCE CONTRIBUTIONS

SpaCy (<https://spacy.io/>) (<https://github.com/explosion/spaCy/tree/master/spacy/lang/hi>)

Contributing to build a language model for Hindi

TECHNICAL ACHIEVEMENTS

- Air Pollution Forecast App, one of the top 50 ideas out of 1000+ ideas at Hackference hackathon sponsored by Google and GitHub.
- Virtual Reality Visualization Expert Intern for [GMetri](#) during Hackference 2018's hiring fest in Bangalore.

SKILLS

Natural Language Processing • Machine Learning, Deep Learning • Python, R, C, C++ • Unix • git • HTML, CSS, JavaScript • Django • Bootstrap • Actions on Google Assistant • Dialogflow

VOLUNTEERING & NON -TECHNICAL ACHIEVEMENTS

Assisted Kerala Flood Search and Rescue Team during the floods in Kerala by contributing as a chat support volunteer, relocating and rescuing 2000+ people in 2 days. • Helping girls fight FGM and to other issues by mapping rural Tanzania on open street map as a United Nations Online Volunteer. • Core crew, TEDx Azadnagar, Mumbai. • Assisted in organizing WiDS Pune 2019 conference, an extension of WiDS conference at Stanford, to support and celebrate women in Data Science, which impacted 1000+ people.

