

# Piyush Agrawal

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## EDUCATION

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### Bharati Vidyapeeth's College of Engineering

B.TECH in Information Technology; GPA: 8.5/10

New Delhi, India

June 2019

**Major** Multi-Drone Object tracking with keep watching an object

**Minor** Sketch2Code: Converting hand-drawn sketches into coded UI

### Kendriya Vidyalaya

Higher Secondary (12th) 88.2%

New Delhi, India

2014

### Kendriya Vidyalaya

Secondary School (10th) CGPA: 7.6

New Delhi, India

2012

## SKILLS

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- **Programming:** Python, Javascript, C++, Go, Node, API Development, LaTeX, Computer Vision
- **Cloud:** AWS, GCE, Kubernetes, EKS, Terraform
- **Libraries:** PyTorch, Keras, Scikit-Learn, Numpy, Pandas

## EXPERIENCE

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### Swapcard

Backend & DevOps Engineer

Paris, France

July 2019 - Present

- Adding and improving features in Nodejs based GraphQL backend
- Migrating the infrastructure to the new Kubernetes based one.

### Mentor at FOSSASIA

Google Code-in and Summer of Code Mentor

New Delhi, India

Nov 2017 - Present

- **roles**
  - \* Google Code-in 2017 Mentor, Nov. 2017 - Feb 2018
  - \* Google Summer of Code 2018 Mentor, May. 2018 - Aug 2018
  - \* Google Code-in 2018 Mentor, Nov. 2018 - Feb 2019
  - \* FOSSASIA's Open Event Project Maintainer, Aug. 2018 - PRESENT

### Indian Council of Medical Research, Govt. of India

Software Developer

New Delhi, India

Nov. 2017 - Aug. 2018

- Created India's first Equipment Repository in Medical Research
- This project lead all institutions to teach themselves and start creating list of their equipment
- Won this project as part of Winning the Smart India Hackathon 2017

### FOSSASIA

Google Summer of Code Student

New Delhi, India

April 2017 - Aug. 2017

- The project was focused on decoupling the Organization Server into API centric approach

- With my team worked on the same, Shifting all basic CRUD options on JSON spec API and then documenting it using API Blueprint
- After that adding different complex operations like Ordering, Payment, Mailing Mechanisms.
- Also, worked on some of the major things like Ordering System, Permission System, API Blueprint as well as collaborated with my team creating various APIs, shifting blueprints, re factoring mailing functions.

### **Khareedto.com**

*Co-Founded*

New Delhi, India

*Feb 2016 - April 2017*

- KhareedTo was an e-commerce based social enterprise where we aimed to provide all vitals needed by freshers of Engineering colleges from their first year to throughout the four years. Link: <http://khareedto.ipiyush.com>

### **Biohiring.com**

*Software Developer Intern*

New Delhi, India

*May. 2016 - July. 2016*

- Worked with them on their first phase of new online job portal.
- Designed and Crafted the Application Structure.
- Created AngularJS and Laravel based project set up with NodeJs as the proxy between them.
- Worked on complete registration process on Employer and Jobseeker with the registration of Companies.
- Languages/Frameworks/Technologies used: Javascript, AngularJS, NodeJS, Nginx, DigitalOcean, AWS, PHP, Laravel, LESS, Gulp.

### **theSmartTrolley.com**

*Software Developer Intern*

Delhi, India

*Dec. 2015 - Jan. 2016*

- Updated APIs for the front store to RestFul API design.
- Created Control Panel in AngularJS for managing orders, customers, offers, etc.
- Creates RESTful APIs for the control panel in Laravel.
- Languages/ Frameworks used: Javascript, AngularJs, LESS, PHP, Laravel

## **AWARDS & ACHIEVEMENTS**

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- **First Prize Winner** Celestini Prize 2019: Machine Learning based solution on women safety
- **Regional Round Winner** Facebook Developers Circles Challenge 2019
- **Global Bonus Round Winner - \$10,000** Facebook Dev Community Challenge 2018
- **Invited Participant HackMIT 2018** - Annual Hackathon of MIT, Among first 50 teams through their challenge
- **Regional First Winner - \$7500** Facebook Dev Community Challenge 2018
- **3rd Place** Smart India Hackathon 2017
- **Winner** DCB Hackathon
- **ICPC 2017- Regional Round** Among 2 from the college
- **Top 2 Finalist** IndiaSkills - 2016 (Web Design & Development)
- **Bronze Awarded** National Round IndiaSkills 2016, Awarded by Skills Minister of India - Rajiv Pratap Rudy

## PROJECTS

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- **Aerial Vision** Tracking people on the aerial vision received from drone
  - A project that is among the best projects awarded by my university. It can track people on aerial vision captured from the drone with re-identification with the help of the tracker, DeepSort.
- **DonorFu** Connecting potential donors with Facebook group posts requesting blood donations
  - A project that won \$17500 from Facebook Dev Community Challenge is a messenger and a talking bot over phone call to connect potential donors with blood requester.
  - <https://devpost.com/software/donorfu>
- **H2** A lightweight browser to watch/embed things on picture-in-picture mode
  - An electron app that allows you to watch many things on picture-in-picture mode throughout your apps and workspaces.
  - Extended, 3-components based model to implement plugins easily.
  - Actively participated in Hacktoberfest'18. Received good response from participants.
- **Sketch2Code** Converting Sketches into Webpages
  - An A.I. converting sketches into UI. This project is based on a Neural Network that is fed with a sketch of the UI. The output of the network is Mobile UI object after performing compound and overlapping check.
- **Auto Server** Making your life more lazier and smarter
  - A project with an aim to create a "ready-to-install" image of Ubuntu which will have all features for a Developer/Researcher to remotely connect his physical systems and with pre-installed services and servers that are generally required by Devs and Researchers.
  - Provided with several features to let your system work as remotely accessible system for several services like personal cloud storage, emergency encrypted file transfer something like your own gate to Tor network.
- **LatexGo** Using the power of Web
  - This project is motivated with the simple question that, if we can mine bitcoins on browsers then why not compile programs in it?
  - This project uses one of the great tools, "emscripten" to convert the LLVM based compilers into native JS code
  - The complete Tex package has been re-compiled into Javascript from C++ and is working much faster in compare to products live Overleaf.com

## PUBLISHED PROJECTS

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- **GitPress** An Alexa Skill for your Github
  - A published Alexa Skills built on node.js and consuming around 20 APIs of GitHub. It provides the developers with the features of monitoring their issues and PRs from their Alexa device directly.
- **TOMT - Tip of my tongue** An Alexa Skill for words on your tip
  - A published Alexa Skills built on node.js and providing a unique experience to remember words.
  - It helps you remember words that are on your tongue but can't remember them.

## RESEARCHES

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- **Automated Music Generation using LSTM** 2018 5th International Conference on Computing for Sustainable Global Development, IndiaCom-18
  - Music composition has been an interesting and active area of research in Machine Learning. In this paper we worked on generating music through LSTM(Long Short-Term Memory) based Recurrent neural network.
- **Using Neural Network to identify forgery in offline signatures** 2019 - International Conference on Innovative Computing and Communication
  - This paper proposes an efficient and novel method for the identification of forged signatures from offline signatures
- **Image Completion using CapsGAN and DCGAN** yet-to-publish
  - In this paper, we present a novel approach that leverages the combination of capsule networks and generative adversarial networks that is used for generating images in a more realistic manner. This approach tries to generate images which are locally and globally consistent in nature by leveraging the low level and high-level features of an image.
- **Sketch2Code - Converting Sketches to Web Pages** yet-to-publish
  - An ongoing research with the team as part of my minor project. This AI model is based on CNN which converts your sketches into web pages. A more generalized, multi-purpose JSON based design language has been generated which is the output of the model to then convert into web UI.

## PROGRAM COMMITTEES AND VOLUNTEER PARTICIPATION

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- **Mozilla Campus club** Served as Co-Captain
  - Started competitive coding initiative, with the aim of improving data structures
  - EventInsta: The centralized event notification system for the BVP campus. Now being further developed by the members as a college product.
  - Designed the 3D map of the college for Virtual Reality as a part of workshops in Mozilla
  - Organized several meetups for the Outreachy program to initiate the participation
  - Organized an interactive session with the co-founder of one of the biggest open source organization, FOSSASIA
- **Google Developers Club** Technical Executive
  - Conducted workshops for Git
- **TEDxBVCOE** Production Head
  - Worked on productions tasks related to billing and payments. Also, managed web administration
- **BVPCSI** Mentor - HackOver, Tech Consultant
  - Served as mentor on their Annual hackathon, HackOver 1.0
  - Helped preparing the problem statements and judging criterias