

Dhruv Jawalkar

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<https://github.com/DhruvJawalkar> | <https://dopelemon.me/> | Corvallis, OR

Education

Oregon State University, Corvallis – OR, USA

Sep 2018 - Dec 2020

Master's in Computer Science (Software Innovation track)

Focus Area: Software Engineering and Computer Vision

GPA: 3.77/4.00

Related Coursework: Software Engineering Methods, Software Project Management, Computer Vision I & II, Machine Learning, Deep Learning, Embodied AI, Data Structures and Algorithms, Computer Architecture, Programming Languages

BITS-Pilani, Hyderabad Campus – Hyderabad, India

August 2009 - Jul 2013

Bachelor's in Computer Science

Technical Skills

Programming Languages Java, Python, JavaScript, C++ (Beginner), Dart (Beginner), Bash, Shell, HTML/CSS

Machine Learning PyTorch, TensorFlow, Keras, OpenCV, scikit-Learn, NumPy, Pandas, Jupyter Notebook

Backend Flask, Springboot (Beginner), Node.js, Postman, REST

Frontend Angular.js, JQuery, gulp.js, Responsive Design, bootstrap

Databases Relational (MySQL), Non-relational (MongoDB)

Mobile Flutter SDK, Dart (Beginner), Android Studio

Work Experience

Oregon State University, Corvallis, OR — Graduate Teaching Assistant

Sep 2019 – Sep 2020

- Guided under-graduate students on Software Engineering classes
- Graded student assignments and provided feedback for improvement, assisted instructors with coursework
- Classes: Software Engineering, Mobile Software Engineering and Programming Languages
- Technologies: Java, JavaScript, HTML/CSS, UX Design, Agile, Scrum, Git, Flutter, Dart, Android Studio, Mobile App Development, Haskell

Kony Labs, Hyderabad, India — Senior Software Engineer

Dec 2016 – Jun 2017

- Was hired and responsible for improving **console performance** and user experience
- Implemented lazy rendering and filtering directive component for rendering limited items which fit the view port, rendering, filtering on large lists with tabular data was slow (~2secs) on each keystroke hence populated view with limited items, component rendering time reduced significantly (~200ms)
- Technologies: Angular.js, JavaScript, HTML/CSS, Java, MySQL

Engage BDR, Hyderabad, India — Software Engineer

Apr 2016 – Dec 2016

- **Lead frontend development** for the first version of [IconicReach](#), an influencer marketing platform
- IconicReach was a platform for brand owners to connect with Instagram influencers to run their Ad Campaigns
- Collaborated with engineers with team size of 4, we built the webapp using Angular.js, bootstrap, Grunt.js, Responsive Design to support mobile, wrote end to end test cases using Protractor.js, unit tests using karma and jasmine
- Technologies: JavaScript, Angular.js, Git, JIRA, Subversion, Agile, Scrum, WebStorm

Fission Labs, Hyderabad, India — UI Engineer

Apr 2016 – Dec 2016

- Built web apps for Online Advertising company, [DeepForestMedia](#), built their Demand Side Platform, the Online Ad creation portal for customers to run their ad campaigns across various ad exchanges, targeting the demographic they'd like and creating brand, performance or customer retargeting campaigns. Metrics like CPI, CPM, CTR, CPA, CPC were tracked across ad exchange lines and a reporting dashboard was built to help visualize which lines were doing better for which demographic
- Developed the customer Ad Performance Dashboard, this showed ad campaign performance across various ad exchange lines and demographic parameters with visual graphs to help customer visualize return on money spent and change line budget accordingly. This feature distinguished the company from its competitors and helped onboard new customers, for ease of interpretation and transparency in campaign performance.
- Mentored new talent on the team
- Technologies: JavaScript, Angular.js, Highcharts, Bootstrap, Git, JIRA, Agile, Scrum

Projects [\(Click Here\)](#)

Pose Guidance System – Guiding user through a pose routine by doing real-time 2D Human Pose Estimation

Spring 2019

- Developed a lightweight network by making modifications to LightWeight OpenPose model, allowed for interference of **5-10 fps on a CPU**
- We broke down routine into intermediate key frames, provided guidance by measuring differences in relative angles between limbs
- Technologies: PyTorch, OpenCV, Python

Open Source Contributions

Fall 2018 & Spring 2019

- [Depth Map Prediction from a Single Image using a Multi Scale Deep network](#) (paper implementation, **50+ stars**)
- [Yoga Pose Estimation](#) (**22 stars**, project with pose classifier model on 107 classes + joint estimation model, OpenPose)

Embodied AI: Visual Navigation base Environment Exploration [\(video\)](#)

Fall 2019

- Developed baseline for efficient exploration of a 2D grid tunnel map under fuel constraint for a robot. Formulated efficient exploration as a Travelling Salesman Problem. Added fuel constraint reduced it to an Orienteering Problem with limited budget to cover all nodes. Formulated all constraints in the Gurobi Optimizer to obtain an optimal solution to efficiently explore the map given limited fuel
 - Technologies: PyTorch, Python, Gurobi Optimizer, Jupyter Notebook
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