

Kartik Sirwani

LEAD DATA SCIENTIST

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Summary

DevOps Engineer at fintech & blockchain company Dunamu which is known for operating Upbit, the largest cryptocurrency exchange in Korea. Have led growth at infrastructure departments in two fintech companies as lead engineer and founding member. 12+ years of diverse software engineering experience with specialties in software architecture design, infrastructure operation, backend development, and security engineering.

Love to contribute to open sources and tech communities by sharing knowledge and experience. Prefers a command line interface environment as a big fan of Vim, Linux, and macOS. Always trying to customize to find the most optimal environment. Interested in devising a better problem-solving method for challenging tasks, and learning new technologies and tools.

Work Experience

Cimpress

Bengaluru

LEAD DATA SCIENTIST

Sept 2020 - Present

- Background Removal API : This API (used in web tool backgroundly) removes backgrounds from customer-uploaded images and leaves only the salient content in the image. This tool processes approximately 200,000 daily requests for custom image engraving services on products like mugs and t-shirts, saving about 3 million USD annually. In this project, I led the development and training of the state-of-the-art fba-matting algorithm and trained a U-Net model for accurate saliency detection, achieving a visual acceptance rate of 87 percent. Technologies Used: python, pytorch, opencv
- Create Portrait API : This api imparts a portrait photo effect to regular photographs, i.e., the main subject(s) is maintained in sharp focus, and at the same time, the background is gently blurred to add depth and aesthetic appeal to the photograph. In this project, I combined the open-source mega-depth model with in-house background removal service. Technologies Used: python, pytorch, opencv, pillow

Foghorn Systems

Pune

DATA SCIENTIST

Feb 2020 - Sept 2020

- Mask Detection Model : This model is responsible for identifying individuals not wearing masks. It was deployed in factories (using IIOT) and real-time alerts were sent when the count exceeded a predefined threshold during the COVID-19 pandemic. I trained a SSD mobilenet v2 object-detection model and achieved a precision of 85 percent. Technologies Used: python, tensorflow, opencv
- Connector Detection Model: This model identifies pipe connectors in oil factories, to prevent drilling in unsafe areas. I trained a YOLO v3 object-detection model and achieved a precision of 88 percent. Technologies Used: python, tensorflow, opencv

Razorthink

Bengaluru

SENIOR ARTIFICIAL INTELLIGENCE ENGINEER

Sept 2018 - Dec 2019

- Table Detection Model: This deep learning model is used to detect table like structures in a pdf document. I trained a Faster Rcn (VGG16) network on pdf documents using the concept of curriculum learning. Achieved a precision of 84 percent. Technologies Used: python, tensorflow, opencv
- Template Detection Service: This service compares the layout and structure of two PDF documents. If they are found to be similar, they are categorized under the same class or 'template'. To accomplish this, I built and trained a Siamese network utilizing a pre-trained VGG16 net. Technologies Used: python, tensorflow, opencv, MongoDB

Nowfloats

Hyderabad

BACKEND DEVELOPER

June 2016 - Sept 2018

- Update Synchronize API: This API synchronizes merchant updates and reviews across various social platforms such as Facebook, LinkedIn, Twitter, and Quikr. The API is used by over 19,000 customers and handles around 50,000 updates on a weekly basis. I made REST APIs, services, lambda functions, cron jobs and created deployment pipeline on ECS. Technologies Used: Python, NodeJs, ECS, Docker, Lambda, Express, MongoDB, Route 53, Ubuntu, SQS, Python
- Update Categorization Service: This service fetches all the product updates made by the customers on their websites and then categorizes them into either offers, discounts, or sale price. I used natural language processing models such as 'bag of keywords' to classify the updates into categories. Technologies Used: Python, Scikit Learn, Pandas, Matplotlib, MongoDB, MySQL
- Purchase Probability Model: This model analyses sales data to predict probability of purchase based on customer characteristics. It helped reduced the customer acquisition cost by 50 percent and increased the conversion rate from under 2 to 20 percent. I trained the classifier using logistic regression and decision trees. Technologies Used: Python, Scikit Learn, Pandas, Matplotlib, MongoDB

Certificates

- 2023 **AWS Certified Advanced Networking - Specialty**, Amazon Web Services (AWS)
- 2022 **AWS Certified Security - Specialty**, Amazon Web Services (AWS)
- 2022 **AWS Certified Solutions Architect – Professional**, Amazon Web Services (AWS)
- 2021 **AWS Certified SysOps Administrator – Associate**, Amazon Web Services (AWS)
- 2020 **Certified Kubernetes Application Developer (CKAD)**, The Linux Foundation
- 2023 **HashiCorp Certified: Consul Associate (002)**, HashiCorp
- 2023 **HashiCorp Certified: Terraform Associate (003)**, HashiCorp

Education

POSTECH(Pohang University of Science and Technology)

B.S. IN COMPUTER SCIENCE AND ENGINEERING

Pohang, S.Korea

Mar. 2010 - Aug. 2017

- Got a Chun Shin-II Scholarship which is given to promising students in CSE Dept.