AAYUSH KUMAR

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San Jose, CA - U.S. Citizen

EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY
B.S. in Computer Science: Intelligence & HCI Threads - 3.83 GPA
ATLANTA, GA • GRADUATING DEC 2018

EXPERIENCE

YAHOO: TRIPOD PROJECT
Tripod Engineering Intern
SAN FRANCISCO, CA • MAY 2017 - AUG 2017

Yahoo's platform for commoditized photo & video storage, serving, enrichment, aggregation, & search
- **Improved image search parsing accuracy** by implementing search metrics & analyzing query processing algorithm
- **Built Tripod Map/Image Viewer UI** in React.js to visualize EXIF-metadata/geodata for individual users

SMART CITY INFRASTRUCTURE
Computer Vision Engineer
ATLANTA, GA • AUG 2017 - PRESENT

Working under Dr. James Tsai & Dr. Tony Yezzi to develop city infrastructure monitoring/diagnosis with modern technologies
- **Developing vehicle detection, categorization & tracking** system to gather data about traffic flow/behavior patterns
- **Using YOLO Real-time object system** backed by Tensorflow implementation of darknet & trained on Udacity's Autti dataset

PROJECT RESURGENS
AHNA AI/IOT Developer
ATLANTA, GA • MAY 2016 - AUG 2017

Georgia Tech's Smart Solar Home & Internet of Things project emphasizing self-sustenance/net zero energy/carbon footprint
- **Training a classification model of electricity consumption** using outlet reading data to optimize energy consumption
- **Building cross-platform React Native App** that helps users track electricity & water savings/consumption over time

ARON DEVELOPERS
Full Stack Rails Developer Intern
LOS ALTOS, CA • MAY 2016 - AUG 2016

Real estate developer which focuses on building smart, luxury homes in San Francisco Bay Area
- **Effectively visualized net interest** being paid for mortgages on all unsold properties/construction sites
- **Designed & Implemented SQL Tables** for Loans database to support realtime ruby on rails data visualization dashboard

PROJECTS

RAVEN'S MATRIX SOLVER
Knowledge Based AI Project
AUG 2017 - PRESENT

Built a Python Agent to solve Raven's Progressive Matrices, a credible measure of intelligence via visual analogies
- **Built Semantic Networks** to capture knowledge representation using Numpy adjacency matrices & object oriented design
- **Leveraged Generate & Test** methodology to determine affine image transformations & recognize complex visual patterns

FRAMEHUNT
1st at HackGT (185 submissions)
OCT 2017 - PRESENT

The Ctrl-F for Videos: A tool that helps users quickly search & skip to parts of a video based on visual content
- **Worked on Clarifai API Integration** & optimized video processing & search indexing for faster, more helpful searches
- **Built data flow, state management & oversaw design** of ReactJS WebApp backed by Amazon EC2 server & ExpressJS

LOCAL FEATURE MATCHING
Computer Vision Project
AUG 2017 - PRESENT

Wrote a Matlab algorithm for matching points between multiple views of the same physical scene
- **Implemented Harris Corner Detector** to identify reproducable & salient interest points in corresponding images
- **Created SIFT Pipeline** to describe each interest point optimally for improved point matching correspondence

ITRANS
Android Developer
ATLANTA, GA • JANUARY 2016 - MAY 2016

Faculty research on optimizing campus transportation systems & developing a forecasting, computation, & communication system to improve bus circulation
- **Implemented automated announcements** of bus stops with realtime broadcasts of route changes, upcoming cancellations & weather forecasts with Android TextToSpeech engine

SKILLS

LANGUAGES
- Java
- Python
- JavaScript
- Matlab
- HTML/SASS/CSS
- Ruby on Rails

LIBRARIES
- SKLearn/Tensorflow
- OpenCV/PIL
- ReactJS/React Native
- Redux/ImmutableJS
- LeafletJS
- Android SDK

DEV TOOLS
- Jira
- Designs/Mockups (Sketch)
- Splunk
- Git/GitHub Workflow
- Linux/RHL (SSH)
- Enterprise Slack/Hipchat

RELEVANT COURSES
- Knowledge-Based AI
- Computer Vision
- Intro to AI
- Robotics & Perception
- User Interface Design
- Algorithm Design/Analysis

AWARDS

ACADEMIC
- **Faculty Honors** 4.0 GPA in Fall 2015 & Spring 2016
- **Dean's List** maintain a GPA average of 3.0 or above

SPEECH AND DEBATE
- **2nd** Cal Berkeley National Invitational (117 competitors)
- **1st** University of Pacific Jon Schamber Invitational
- **VP of Speech** Facilitated administrative tasks for Leland High School's Speech & Debate Team of over 300 students

Made With ReactJS