

# PARAG BHATNAGAR

DEVELOPER • DESIGNER • ILLUSTRATOR

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## EDUCATION

### YALE-NUS COLLEGE 2013-17

B.S. Math and Comp Science  
GPA: 4.2 / 5.0

YNC\_Hacks President and  
Co-Founder  
Visual Arts Society President

### YALE UNIVERSITY 2016

Yale VISP Programme

### ANGLO-CHINESE JC 2011-12

6 As at A Levels (Sc. Stream)

Oratorical & Debate Society  
Outstanding Service Award

## COURSEWORK

Data Structures & Algorithms  
Software Development  
Human-Computer Interaction  
Operating Systems  
3D Fabrication Techniques  
Digital Animation  
Computer Vision

## SKILLS

### PROGRAMMING

Front-End Web Development  
using frameworks (React JS,  
React Native, Angular) and  
Back-End using NodeJS

Python - Machine Learning  
Data Analysis and Web Dev  
(Django, Flask) in Python

Proficiency in Java, OCaml, R, C

### DESIGN SOFTWARE

Photoshop, Illustrator, inDesign  
Premiere, After Effects,  
3DS Max, 3DS Maya, Blender,  
Balsamiq, Sketch

### LANGUAGES SPOKEN

English, Hindi, Bengali

## INTERESTS

Improvisational & Stand-up  
comedy, Science Fiction &  
Graphic Novels, Languages,  
Accents, Etymology & Linguistics,  
Sociology, Cognitive & Behavioral  
Psychology, Mental Wellness &  
Therapeutic Practices

## WORK EXPERIENCE

### OCT 18-NOW SINGAPORE AIRLINES TECHNOLOGY DEVELOPMENT EXECUTIVE

Part of the SIA Digital Innovation Lab, conducting research into the viability of new digital technologies to improve operational efficiency and passenger experiences. Conducting feasibility studies on bleeding-edge solutions and ideas and building proofs-of-concept for viable solutions including AR/VR, web and app-based solutions and blockchain-based tech.

### MAY-OCT 18 UNDELUSIONAL FRONT-END DEVELOPER

Leading the front-end development and architecture of a web portal that allows users to diagnose their emotional state and creates a positive workplace environment by connecting employees to positive experiences and helping managers address the needs of their employees, thereby improving employee engagement and productivity.

### JAN-MAY 18 HASTE TECH FRONT-END DEVELOPER

Led the development of the Android and iPhone applications by Haste - a data driven shopping application allowing shoppers to skip the cashier queue, and allowing merchants to improve inventory and promotion management using machine learning

### 2016-2017 DINAR DIRHAM WEB ENGINEER / DESIGNER

Designed visual assets for the company, including the corporate web page and developed a cryptocurrency exchange platform serving over 30k active users and processing financial transactions ranging in hundreds of thousands of Dollars

Corporate Webpage URL: <https://www.dinardirham.com>

Cryptocurrency Wallet URL: <https://www.universalblockchains.com>

### MAY-AUG 15 KULICKE & SOFFA BUSINESS DEVT INTERN

Invented a real-time fire-detection system using machine learning and computer vision trained on thermal footage. The product received a patent under review on Automated Fire Detection & Suppression Systems (US - 183467-3169, China & Singapore) and was awarded SGD 10000 in the form of the NUS Practicum grant to develop the product.

## SELECTED PROJECTS & ACHIEVEMENTS

### OCT 2017 GOOSEBUMPS: SENSORY SUBSTITUTION USING SERVOS CO-AUTHOR

Designed and implemented a hardware to wetware solution to provide realtime haptic feedback, effectively substituting visual information with haptic, allowing a user to drive a car in a racing game while blindfolded. Project won first place at NUS Hack & Roll 2017, and was presented at the 2017 ACM International Conference on Interactive Surfaces & Spaces

Hack & Roll 2017 Project URL: <http://devpost.com/software/sensex>

ACM 2017 Paper URL: <https://dl.acm.org/citation.cfm?doid=3132272.3132293>

### APR 2017 EFFECTS OF DISTRACTION ON HAPTIC PERCEPTION SENIOR CAPSTONE

Investigated the effects of auditory and haptic distractions on haptic feedback perception. Found significant effects of in both domains and used them to create distraction-resistant haptic feedback patterns for better communication in phones and wearable devices. Was co-author of "Attentional Considerations for Vibrotactile Wearable Devices", submitted to CHI 2019

### AUG 2015 ELECTIONNAIRE CO-CREATOR

Designed a website that helps Singaporeans determine which political party thinks like them. Received over 671k page-views and had over 180k unique users in 1 week.

URL: <https://electionnaire.info>

## AWARDS

### 2013 GEORGETTE CHEN STUDY AWARD

### 2012 SCHOLASTIC ACHIEVEMENT AWARD (6 As AT A LEVELS)

### 2010 PETER TAN THUAN TECK AWARD (8 A1s AT O LEVELS)

### 2009 A\*STAR INDIA YOUTH SCHOLARSHIP