Ansh Patel
Interdisciplinary Researcher and Engineer
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Selected Work Experience

Research & Systems Development Engineer, Columbia University's Electrophysiology, Memory & Navigation Lab | July 2016 - Present

- Worked as a lead engineer to develop spatial memory experiments and data processing systems used in neuroscience and behavioral psychology experiments conducted on patients diagnosed with epilepsy and traumatic brain injuries as part of different research projects funded by National Institutes of Health (NIH), National Science Foundation (NSF) and DARPA's RAM (Restoring Active Memory) as part of its Brain Initiative.
- Collaborated with researchers at University of Pennsylvania, Dartmouth University, Columbia Medical Center as well as Albert-Ludwigs-Universität Freiburg to conduct neuroscience experiments, integrating machine-learning of voice data using Tensorflow and PocketSphinx, virtual and augmented reality (Oculus,ARKit) and eye-tracking data (C++ libraries for Tobii and SMI models)
- Developed interactive, graphical tools using Python and OpenCV to visualize complex EEG data recorded from subjects for research published in scientific journals like Neuron.

Lead Developer, Ability Lab at NYU | January 2016 – July 2017

Worked as the lead developer on ReKinect project developing a suite of interactive applications and algorithms analyzing *limb-joint relations* using Kinect, OpenCV and Unity3D aimed to rehabilitate patients recovering from hemi-paralytic strokes

Looking Glass Productions, Brooklyn, NY | May 2016 - July 2016

Did contract work as a games programmer to develop prototype graphical, interactive technology for a proprietary volumetric graphical display that the company launched in 2017

Game Designer & Developer, CREATE Labs | March 2015 – September 2015

Worked as the lead front-end developer on a grant by the GATES-CEREGO Foundation, helping prototype and design & develop core functionalities of educational simulations based on statistics.

Research Assistant & Data Analyst, NYU Stern School of Business | October 2014 – January 2015

Worked as a Research Assistant helping scrape, mine, analyze and visualize big datasets using Python and R of shared economy applications and their effects on laborers like Uber and TaskRabbit

Staff Writer, Arcade Review | January 2015 - March 2016

Wrote and published five essays for the experimental games quarterly

Education

New York University Tisch School of Arts, New York, USA | 2014-16

MFA in Game Design

Mumbai University, Mumbai, India | 2010-2014

B.E. in Computer Engineering; Passed First Class

Skills

Languages: C/C++, C#, JavaScript,Python,Matlab,R,HTML,CSS
Frameworks: OpenCV, tensorflow, caffe, keras, scikit, scipy, OpenGL
Design: Adobe CC (PS,AI,PR), Maya, Blender
Game Engines: Unity3D, Unreal Engine 4
DevOps: Azure, AWS

Selected Grants & Awards

NSF Joint-Euro Time Cells | 2017-Present
NIH U01 Supplementary Grant | 2017-Present
NIH Spatial Cells Grant | 2016-Present
Interactive Fiction Fund | 2015
Tisch Interdepartmental Grant | 2014-15 and 2015-16

Triple recipient for *Horizons, Skype Heartbreak Show* and *Resounding the City*

Independent Projects

- Published a pre-print paper on analyzing various algorithmic fairness criteria applied to automated decision-making tools used to predict recidivism risks and proposing a novel method inspired from welfare economics
- Created a web project for an art installation to describe and speculate on the effects of future technology on our energy usage