# Nithesh B Javvaji

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## Education

**Northeastern University**, Boston, MA — **Jan 2017 - present**
Ph.D., Interdisciplinary Engineering

**Northeastern University**, Boston, MA — **Aug 2015 - Apr 2017**
M.S., Operations Research

**Indian Institute of Technology (ISM)**, Dhanbad, India — **Jul 2008 – May 2012**
B.Tech., Mechanical Engineering

## Technical Expertise

- Languages: Python, R, C#, PHP, Matlab, Git, LaTex
- Databases: MySQL, MongoDB
- ML frameworks: scikit-learn, Tensorflow, PyTorch
- Optimization: AMPL, Gurobi, CPLEX
- Visualization: Tableau, R (ggplot2, plotly), Python (matplotlib, altair), D3.js
- Tools: Unity, Arena, Vensim, JMP, Minitab, SPSS

## Academic Experience

**Graduate Research Assistant** — **Jan 2017 - present**

- Developing predictive models of human perception, behavior and decision making in serious games to improve the structure of Human-Computer interaction. My research focuses on model-based approaches to enhance collaboration in interactive systems by drawing techniques from machine Learning, optimization, bayesian and qualitative methods.
  Advisor: Dr. Casper Harteveld, Assistant Professor (Game Design)

**International Business & Strategy Research Assistant** — **Sep 2016 – Dec 2016**

- Worked on modelling the relationship between Macroeconomic indicators, Healthcare process measures, structural measures and outcome measures using statistics and machine learning from a database of 225 countries provided by World Bank, World Health Organization.

## Professional Experience

**Aditya Birla Group** (Mining & Mineral Resources Business), Mumbai, India — **Jul 2012 - Jul 2015**
Role: Engineer (Planning & Project Management)

**Hyundai Construction Equipment India Pvt Ltd**, Hyderabad, India — **May 2011 – Jun 2011**
Role: Management Trainee

## Academic Projects

- Exploring Human-Centered Design for Human-Machine Collaboration in High-Stakes Decision Making Scenarios (*Funded by: Office of Naval research)* — **Sep 2018 – present**
- Advancing Methodology for Social Science Research Using Alternate Reality Games: Proof-of-Concept Through Measuring Individual Differences and Adaptability and their Impact on Team Performance *(Funded by: DARPA)* — **Sep 2017 – Dec 2018**
- Towards a Resilient Logistics Game Engine for Scenario Planning, Performance Assessment, and Training — **Jan 2017 - present**
- Optimizing Radiation Therapy Treatment Plans
- Modeling and Forecasting Temperature & Rainfall pattern in Chennai as a seasonal ARIMA process

## Publications

- A Human-In-the-Loop Approach to Modeling Adaptability in Team Environments (in review), role: co-author, Foundations of Digital Games, 2019.
- Computational modeling of Situation Awareness in a Business Simulation Game (in progress), role: author