

**SANTA CLARA UNIVERSITY**  
**DEPARTMENT OF COMPUTER ENGINEERING**

Date: November 30, 2017

I HEREBY RECOMMEND THAT THE THESIS PREPARED UNDER MY SUPERVISION BY

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**Colby Harper**  
**Sean Karstein**

ENTITLED

**On the Construction of Matter, or Is There a God Particle?**

BE ACCEPTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

BACHELOR OF SCIENCE IN COMPUTER SCIENCE AND ENGINEERING

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Thesis Advisor

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# **On the Construction of Matter, or Is There a God Particle?**

by

Manoj Adhikari  
Colby Harper  
Sean Karstein

Submitted in partial fulfillment of the requirements  
for the degree of  
Bachelor of Science in Computer Science and Engineering  
School of Engineering  
Santa Clara University

Santa Clara, California  
November 30, 2017

# **On the Construction of Matter, or Is There a God Particle?**

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Santa Clara University  
November 30, 2017

## **ABSTRACT**

A good abstract is a concise summary (1–2 paragraphs) of the entire project: introduction, problem statement, work accomplished, results, conclusions, and recommendations. When you write the abstract, imagine that the reader will not read anything else, but that you must get your major point across immediately. This requires efficiency of words and phrases. An abstract is written to stand alone, without jargon or reference to figures and tables in the report body.

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# **Chapter 1**

## **Introduction**

### **1.1 Motivation**

This is the introduction to your thesis and should be page number one. The main body of your thesis should be double spaced.

### **1.2 Solution**

## **Chapter 2**

# **Requirements**

### **2.1 Critical**

Bitch you must be smoking crack

### **2.2 Solution**

# Chapter 3

## Technologies Used

- Hardware
  - Development
    - \* Macbook Pro
    - \* ThinkPad
  - Application Testing
    - \* Iphone 7
    - \* ThinkPad with Iphone emulator
- Programming Languages
  - Swift
    - \* For iOS Programming
  - Python
    - \* For Machine Learning Programming
- IDEs
  - XCode
  - MacVim (or the like)
- APIs
  - TensorFlow