

# SWACHHAND LOKHANDE

Third year undergraduate student (Bachelor of Technology)  
Computer Engineering, VJTI

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## EMPLOYMENT

Technology Analyst, Intern	Morgan Stanley	Summer 2016
<b>Google Protocol Buffer to Execution XML Adapter and Comparator</b>		
<ul style="list-style-type: none"><li>Developed an adapter to convert a Google Protocol Buffer trade message object into an Execution XML trade message</li><li>To be used in the Trade Pre-Processor for the renovation of the External Trades Matching Engine (ETM Engine)</li><li>Also developed a comparator that compares files (generated by the old and the new Trade Pre-Processors) containing multiple Execution XML messages and determines invalid trade message pairs</li><li>Technologies/frameworks used: Java, Google Protocol Buffers, JAXB, XML/XSD/XPATH, Spring, Ant/Ivy</li></ul>		

## EDUCATION

Veermata Jijabai Technological Institute (VJTI), 2013 - present

Pursuing B. Tech. in Computer Engineering, Current CPI - 8.76/10 (up to the 6<sup>th</sup> semester), Latest SPI - 9.75/10

Exam/Certificate	Institution	Year of Passing	Score
HSC	Bhavans College, Andheri - W	2013	88.00%
CBSE	Ashok Academy, Lokhandwala	2011	93.40% (CGPA: 10/10)

## TECHNICAL SKILLS

Languages: C++, Java, Python, Javascript, HTML/CSS, XML/XSD/XPATH

Operating Systems: Linux (Ubuntu/Fedora/Arch), Windows

Tools: Vim, Git, Ant/Ivy, Gradle, Eclipse, Visual Studio

Micro-controller Programming: Basics of Arduino, AVR

## PROJECTS

- Delivery Truck Routing** (Mar '15) – Developed a GUI application that routes and manages the delivery trucks of a courier company. Tries to give the shortest Travelling Salesman Problem (TSP) tour using Christofides' 1.5-approximation algorithm. (C++, Qt, SQLite)
- MIT Media Lab India Initiative** (Jan '15) – Playsphere: Designed and developed an intuitive sphere shaped game controller which maps actions like tilting, rotating, tossing and squeezing of the ball to actual game controls. (C++, Arduino, Unity Game Engine)
- GuiltTrip** (Sept '14) – Android application built during a hackathon arranged by Google Developer Group - Mumbai. Tracks the users commute using GPS, suggesting better modes of transportation and encourages the user to reduce their carbon footprint caused by their commute by introducing a feeling of guilt. (Java, Android)
- Projected Touchscreen** (Jun – Jul '14) – An interface for interacting with a computer by touching a projected image of the screen to generate mouse events. Based on the contour of the hand, the fingers were tracked and the mouse events were generated as per the gesture like a single finger touching the surface generated a left click of the mouse at that point. (C++, OpenCV)
- ABU Robocon 2014** (Jan – Mar '14) – Built a manual and autonomous robot to replicate the interaction between parent and child in a playground subjected to a problem statement. Helped the team in building and testing prototypes. (AVR - C)
- Grid Solving Robot** (Dec '13) – Built an autonomous line following robot to traverse a grid from the start point to end point using the shortest path possible avoiding obstacles. (C++, Arduino)

## **ACHIEVEMENTS**

- Secured 2<sup>nd</sup> position in ABU Robocon 2014 (a national level robotics competition) under Society of Robotics and Automation, VJTI
- Was awarded Certificate of Merit by the CBSE Board due to outstanding performance in 10<sup>th</sup> Std. Board Exams and obtaining A1 grade in all the subjects

## **EXTRA-CURRICULAR ACTIVITIES**

- Attended Google Applied CS 2016 – A workshop that helped revisit and apply computer science concepts using the Android platform. Also developed “Critical Mass”, a clone of the popular Android strategy game “Chain Reaction”
- Attended a workshop on making a Line Following Robot organized by Society of Robotics and Automation, VJTI
- Attended a workshop on making a remote controlled air plane organized by AERO – VJTI