

# KSHITI SHAH

Aspiring Software Engineer

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## Skills

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**Programming:** Python · Java · JavaScript · HTML/CSS · LaTeX · React · Spring Boot  
**Software Tools:** Jupyter Notebooks · Git · Android Studio · PyCharm · VSCode · Linux  
**Adobe CC Suite:** Illustrator · Photoshop · Premiere Pro · After Effects · Muse  
**Microsoft Office:** Excel · Word · PowerPoint · OneNote · Publisher · Outlook

## Education

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### University of Toronto – Computer Science Specialist and Statistics Major

September 2017 - Present

- Pursuing Honors **Bachelor of Science** (BSc), expected graduation in May 2021
- Part of the **Technology Leadership Initiative**, a program dedicated to developing industry-based skills in students
- Current Courses: Systems Programming, Data Structures and Analysis, Multivariable Calculus, Statistics, Computer Organization

## Software Projects

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### Space Tours Simulator – Hackathon Project

December 2018

- Worked in a team of 5 to create a **full stack web-app** with **React**, **Python**, and **Flask** in less than 12 hours
- Created backend and REST APIs which calculated trajectories using Hohmann Transfer Orbit equations
- **Awarded Best Educational Hack** at University of Toronto Scarborough's MLH Local Hackday

### Linear Regression with Gradient Descent

June 2018

- Implemented **gradient descent** in a **Jupyter Notebook** from scratch to minimize a mean square error function
- Visualized data with 2D and 3D plots created with **matplotlib** and used **NumPy** for numerical computations
- Recorded detailed notes in **LaTeX** markup about relevant mathematical concepts and formulas

### Taylor Series Estimator – A CLI Python Tool

May 2018

- **Applied calculus** concepts to develop an algorithm to estimate select elementary functions
- Optimized repeated calculations of factorials significantly with **dynamic programming** principles
- Wrote well documented and readable code

### Solar Systems – An Educational Java Desktop Application

May 2017

- Created GUI application with the **JavaFX** framework
- Applied principles of **object-oriented programming** to write flexible and maintainable code
- Utilized years of **graphic design experience** to craft a modern UI and to gamify educational content

## Experience

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### Ecomode | Web Developer

December 2018

- Developed a **React** based website for a student organized fashion initiative
- Designed and created site in less than 1 week working with one other student
- Communicated with the Ecomode team consistently for feedback and updated website accordingly

## Design and Leadership Experience

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### TIFF 24-hour Film Challenge | Director and Editor

February 2016, February 2017

- Co-directed and edited two short films that were screened at the TIFF Bell Lightbox
- Developed strong communication skills working in a fast-paced environment with tight deadlines

### Markham District Best Buddies Chapter | Mentor and Coordinator

September 2016 – June 2017

- Took a leadership role in supporting and mentoring disabled students
- Designed 15+ promotional items and helped organize several events throughout the year