# Asmat Kaur Taunque

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Github link: [**zauth14.github.io**](https://zauth14.github.io/)

# Education

California Institute of Technology | Class of 2025

Bachelors of Science in Computer Science

Major GPA 4.2

# Technical Skills

* C
* Java
* Python
* HTML5, CSS, JavaScript (client-side)
* JSON (server-side)
* Haskell
* OCaml

# Projects

**Slime game developer**

May 2023 – June 2023

* Collaborated with 3 to create our own “Slime” game from scratch using a complex physics engine in 4 weeks. This was done in C.
* I created dynamic levels (that change every time the page is reloaded/ the slime respawns), implemented gravity, and rendered animations and background music + sound effects in the game.

**Pacman, space invaders, breakout, stars, spring-simulation game developer**

April 2023 – May 2023

* Collaborated with a partner to make other games from scratch (Pac-Man, space invaders, breakout, stars, spring simulation)
* Developed complex physics engines and key-handling. This was done in C.
* My part included coding the main game demos (typically 1000 lines of code a week).

**Squishmallow e-commerce store developer**

June 2023

* Used server-side JSON, client-side JS, HTML, and CSS to create a webpage to buy squishmallows.
* Features include a squishmallow sorting box, main view + single product view toggles, an “add to cart” option, contact us option, FAQ page, increasing/decreasing quantities, a cart view, and a total price calculator visible in the cart view.

**Web development**

April 2023 – June 2023

* Designed webpages with APIs and created a Spotify game using client-side JavaScript.
* Created a personal portfolio and a dessert recipes webpage using HTML and CSS. Modified existing webpages using CSS for better styling.

**Student Researcher at University of Utah**

June 2022 – August 2022

* Achieved optimization of the kinetics of a chlorination reaction of cerium oxide to reuse nuclear waste as nuclear fuel in 8 weeks.
* Co-authored a scientific paper in Springer journals.

# Experience

**Computer Programming using Java:**

Independently built data structures from scratch including lists, trees, graphs, deques, stacks, and linked lists. Implemented backend in projects to improve matches in search engines, coded a regular and “evil” hangman game.

**Functional Programming using OCaml and Haskell**:

Executed higher order functions and procedures, conditionals, recursion and looping, compound data, functional programming, object-oriented programming, pattern matching, lazy evaluations, lexical scoping in OCaml and Haskell to construct and analyze programs.

# Publications

Chamberlain, J., **Taunque, A.** and Simpson, M.F. (2023) *Time dependent chlorination of CEO2, La2O3 and ND2O3 by Zrcl4 dissolved in eutectic LiCl–KCL - Journal of radioanalytical and nuclear chemistry*, *SpringerLink*. Available at: <https://link.springer.com/article/10.1007/s10967-023-08879-4> (Accessed: 29 July 2023).

# Activities

* Played basketball for India at international level for the FIBA Asia Cup, emerged Division B winners
* Featured in more than 50 newspaper articles for achievements in sports
* Earned the prestigious Davis Scholarship reserved for top ten students