

# Vennila Pugazhenth

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## EDUCATION

### Bachelor of Science in Computer Science

The Pennsylvania State University, State College, PA

GPA: **3.87/4.00**

Dean's List: 2017-Present

Anticipated Graduation: May 2021

#### Relevant Courses

- Artificial Intelligence
- Object-Oriented Programming with Web-Based Applications
- Data Structures and Algorithms
- Systems Programming
- Computer Organization and Design

## SKILLS

**Programming Languages:** C, C++, Java, Python, SQL, Verilog, Rust, HTML, CSS, R

**Software:** Linux command line, MATLAB, Xilinx Vivado, Android Studio

## PROJECTS

**GitHub:** <https://github.com/VennilaPugazhenth>

- A website that sends text message to user regarding driving conditions.
- A file system interface on top of a virtual device with a LRU cache that supports network communication with a server.
- A Hidden Markov Model (HMM) for Part-Of-Speech (POS) tagging.
- A sudoku solver implemented using AC-3 constraint satisfaction algorithm.
- Implemented a five-stage pipelined CPU in Verilog.

## RESEARCH EXPERIENCE

### Equity REU Undergraduate Research Assistant

The Pennsylvania State University, University Park, PA

Aug 2019-Present

- Developing an unsupervised Spiking Neural Network (SNN) using Spike-Timing-Dependent Plasticity.
- Enhancing the data throughput and accuracy of SNN in the MNIST dataset through mini-batch processing.
- Utilizing Google Colab to simulate the SNN in GPU and TPU.

### Multi-Campus REU Undergraduate Research Assistant

The Pennsylvania State University, University Park, PA

May-Aug 2019

- Conducted material research in improving self-healing property of spinel ceramics utilizing recycled lamp glass.
- Investigated various materials to incorporate in spinel ceramic for improving its self-healing property.

## LEADERSHIP EXPERIENCE

### Women in Engineering Program Study Group Facilitator

The Pennsylvania State University, University Park, PA

Jan 2020-Present

- Serving as a mentor for freshmen and sophomore engineering women
- Assisting study group members to understand concepts in a Physics course.

## WORK EXPERIENCE

### Peer Tutor

The Pennsylvania State University, Harrisburg, PA

Aug-Dec 2018

- Tutored fellow undergraduate students in Computer Science, Math and Physics courses.

## ACHIEVEMENTS

Recipient, Penn State Women in Engineering "The Most Innovative Design" 2019

Recipient, Penn State University "The President's Freshmen Award" 2018