

Education

2020–2023 **Stanford University (M.S.)**,
Statistics (Information Theory).
GPA – 4.00+

2018–2022 **Stanford University (B.S.)**,
Computer Science (Theory).
GPA – 4.00+

Experience

- Summer 2020, 2021 **Production Engineering Intern**, Facebook (Security).
- Introduce key import functionality for various cryptographic operations in hardware security modules (HSMs).
 - Integrate fuzz test architecture (automated testing) for different cryptographic operations on HSMs (AES, RSA, ECDSA, HMAC, etc.).
 - Followed the National Institute of Standards and Technology (NIST) Cryptographic Algorithm Validation Program to run test vectors against cryptographic operations on HSMs.
 - Utilize Python-based job scheduler to automate the migration process of hardware security modules to critical, secure hosts.
 - Integrate host allocation process with linear program to ensure high fault tolerance across data centers.
- 2021 - Present **Research Assistant**, Stanford University.
- Research software and computational methods for the purposes of school-choice under the guidance of Irene Lo and Itai Ashlagi. This work is being applied to help compute matches for students in the San Francisco Unified School District.
 - Developing a privacy preserving smart contract which can compute a stable matching without exposing any of the preferences of the participants to a central clearinghouse.
 - Writing a school-choice software package (Python), to simulate and compute student-school matchings under various policy options.
 - Built a web application to help parents understand the impacts of various school-choice policies on their children, while surveying and collecting data.
- 2018-2020 **Research Engineer**, University of Nebraska, Lincoln.
- Prototyped the SensiPlate, an IoT device which measures meal nutritional information using a sensor network and image analysis.
 - Developed an application framework (iOS, Android, browser) allowing stakeholders to interact with data.
 - Authored a white paper for security architecture of stored, nutritional data.
 - Active in the acquisition of grant funding, co-writing approximately \$200,000 in successful grants.

Publications

- 2021 **H. Guru**, A. Weng, S. Pitla, D. Dev, *SensiTray: An Integrated Measuring Device for Monitoring Children's Mealtime Dietary Intake*, IEEE International Instrumentation and Measurement Technology Conference, [[Scholar](#)].
- 2019 **H. Guru**, A. Weng, *Optimizing Hex: The Relative Efficiency of Various Implementation Paradigms in Logic Programming*, Working Paper, [[Scholar](#)].
- 2018 **H. Guru**, S. Jones, A. Guru, *3D Visualization and Virtual Reality in Animal Science*, [[Educause Review](#)].

Achievements

- 2021 **Tau Beta Pi (Selected)**, *Stanford Tau Beta Pi*.
- 2018 **U.S. National Presidential Scholar**, *The White House & Department of Education*.

Skills

Languages Python, C, C++, JavaScript, R, Dart, Prolog
Tools Linux, Git, Apache Airflow
Web HTML/CSS, SQL, Neo4J, React, Flask, Django, AWS
Verbal English, Hindi

Relevant Courses

Algorithms Intro. Algorithms, Randomized Algorithms, Modern Algorithms, Optimization Algorithms, Automata and Complexity Theory
Economics Market Design, Game Theory (Honors), Microeconomic Theory (Proof-based)
Statistics Stochastic Processes, Applied Statistics, Data Mining and Analysis
Mathematics Introductory Analysis, Linear Algebra, Number Theory, Calculus, Metalogic