

Aditya Srinivasan

aditya.srinivasan11@gmail.com

October 2019

<https://adisrini.github.io>

EDUCATION

Stanford University

M.S. in Computer Science, Systems

Palo Alto, PA

2020 – Present

- GPA: 4.30/4.00

Duke University

B.S.E. in Electrical/Computer Engineering and Computer Science

Durham, NC

2014 – 2018

- Summa Cum Laude. GPA: 3.95/4.00
- Thesis: *Gemini: Designing and Implementing a Functional Hardware Description Language*
- Certificate in Innovation & Entrepreneurship

AWARDS

Charles Ernest Seager Memorial Award

Most outstanding undergraduate research project and presentation

Duke University

May 2018

Graduation with Departmental Distinction

Senior thesis with significant Electrical/Computer Engineering accomplishment

Duke University

May 2018

Dean's List with Distinction

GPA in the top 10% of the engineering class; earned every semester from S'15 to S'18

Duke University

2015 – 2018

CGIU Recognition Award

Awarded to ViFlex, a startup aiming to provide affordable eye-care in developing countries

Clinton Global Initiative

Apr 2016

RESEARCH EXPERIENCE

Hilton Lab (Compilers)

Advisor: Andrew D. Hilton

Duke University

2017 – 2018

- Designed a functional programming language, named Gemini, as a high-level alternative to common hardware description languages such as Verilog and VHDL
- Incorporated constructs from powerful languages in order to improve expressivity, such as parametric polymorphism, higher-order functions, recursive datatypes, and type inference
- Introduced and implemented novel type-theoretical concepts, such as devising a type system with multiple atomic kinds and value-parameterized types
- Implemented an optimizing compiler to produce Verilog from Gemini programs

Duke Database Research Group (Computational Journalism)

Advisor: Jun Yang

Duke University

2017 – 2018

- Contributed towards FactWatcher, a system co-developed with Google and UTA to automatically detect, produce, and rank news-worthy facts from raw data
- Implemented algorithms to identify “prominent streak” facts from Men’s basketball data, and designed heuristics to rank and diversify facts presented in a list to users

Intelligent Motion Laboratory (Artificial Intelligence)

Advisor: Kris Hauser

Duke University

Spring 2017

- Explored methods for improving the explainability of artificial intelligence models in order to enhance transparency, interpretability, and trust
- Implemented a web-based 3D visualization tool in Python to portray the reliability of predictions made by linear models in high-dimensional feature spaces

TEACHING EXPERIENCE

Head Teaching Assistant

ECE553 (Compiler Construction)

Duke University

Spring 2018

- Developed a framework to automate the testing and evaluation of submitted compilers
- Delivered lectures on topics such as dataflow optimization and abstract syntax trees to over **25** undergraduate and graduate students
- Assisted the professor in grading midterms and final exams

Teaching Assistant

Multiple Courses

Duke University

2016 – 2018

- Courses taught: Operating Systems, Computer Architecture, Digital Systems, Discrete Math, Artificial Intelligence, Software Design and Implementation, Fundamentals of ECE, Signals and Systems, Electromagnetic Fields
- Held weekly office hours to explain concepts in coursework to over **300** students
- Led weekly lab sections to guide students in applying course theory in practice
- Assisted the course professors in grading assignments, midterms, and final exams

Peer Tutor

Multiple Courses

Duke University

2015 – 2016

- Tutored students in Data Structures and Algorithms, and Computational Methods in Engineering through weekly one-on-one sessions

WORK EXPERIENCE

Jane Street Capital

Software Developer

New York, NY

Sep 2019 – Present

Palantir Technologies

Forward Deployed Software Engineer

New York, NY

Aug 2018 – Sep 2019

- Worked on the Airbus Skywise project to develop applications for airlines to improve operations in multiple domains including maintenance planning, fuel consumption, and reliability
- Built a patent-pending application for aircraft maintenance planning to optimize, visualize, and validate schedules that decreased planning time by **95%** across **3** airlines
- Implemented algorithms to automatically parse and categorize unstructured free-text data in order to visualize defects in aircraft cabins across over **30** airlines

Palantir Technologies

Software Engineer Intern

New York, NY

Summer 2017

- Worked on a spreadsheet application designed to efficiently search datasets across the core analytics platform, build interactive dashboards, and support manual data entry
- Formalized and implemented a type-checking system for spreadsheet functions
- Reduced algorithmic runtime complexity of grid-based spreadsheet operations from quadratic- to linear-time

Cinchapi

Software Engineer Intern

Atlanta, GA

Summer 2016

- Contributed to Concourse, an open-source, NoSQL database for real-time analytics
- Developed a recommendation engine for the database to suggest visualizations to users based on properties of their data with **91.2%** accuracy
- Implemented enrichment algorithms to derive and extrapolate additional information from existing data

VOLUNTEER EXPERIENCE

Code Nation

Mentor

New York, NY

Aug 2019 – Present

- Supporting teachers in Richard R. Green Teaching High School by mentoring students and providing yearlong technical support on web development projects

Plugged In

Co-Founder

Mumbai, India

2011 – 2015

- Co-founded a community service initiative to make technology accessible to underprivileged students at municipal schools across Mumbai
- Delivered weekly lessons in digital literacy to over **60** students across **3** grades
- Led expansion from **3** to over **30** members with branches in Delhi, Kalem, and Jakarta

PREPRINTS

1. **Aditya Srinivasan** and Andrew D. Hilton. Gemini: A Functional Programming Language for Hardware Description. 2019

PENDING PATENTS

1. **Aditya Srinivasan** and Tim Overeem. Valkyrie: graph-based validation engine. Filed September 2018
2. **Aditya Srinivasan** and Anshuman Prasad. SkyLine: aircraft maintenance planning optimization, visualization, and validation. Filed August 2019.

MEMBERSHIPS

Honor Societies: Tau Beta Pi (since 2016), Eta Kappa Nu (since 2017)

Organizations: IEEE (since 2016), ACM (since 2016)