

# DIVYA BAJAJ

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Profile: <https://divyabajaj0025.github.io>

## EDUCATION

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**Oregon State University (OSU), Corvallis, USA (GPA 3.85/4.00)**

Sept 2018 – Sept 2021 Master of Science (M.S.), Computer Science

Thesis: Customizable Visual Traces for Program Explanations

**The NorthCap University (NCU, Formerly ITM), Haryana, India (CGPA 9.71/10.00)**

July 2013 – June 2017 Bachelors in Technology (B.Tech.), Computer Science

## PROFESSIONAL EXPERIENCE

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**Department of Computer Science, UTRGV**

Sept 2022 – Present Lecturer I

- Taught various introductory-level programming language courses to CS and non-CS students
- Advised Senior Projects for two teams of 3-4 students each

**Department of Computer Science, South Texas College**

Jan 2022 – July 2022 Lecturer

- Taught students various programming languages including C++ and Python, and introductory courses focusing on the Microsoft Office as well as basics of computers.

**Department of Computer Science, South Texas College**

Nov 2021 – Dec 2021 Lab Technician

- Assisted students with their programming related questions as well as other courses in the field of Computer Science.

**Department of Computer Science, OSU**

Jan 2019 – Sept 2021 Research Assistant

- Developed new operational semantics to generate simpler proof DAGs.
- Designed query language that transforms proof DAGs to generate program explanations that led to systematic reduction in size of traces for 21 well-known example programs by at least 80%.

**Abacus Desk IT Solutions Pvt. Ltd.**

June 2016 – July 2016 Intern, Software Development

- Developed and implemented algorithm for seat-allocation for college exams using PHP.

**BodyWorks – A Unit of Turnsteps**

June 2015 – Aug 2015 Intern, Software Development

- Used OpenCart framework to develop backend and set up payment gateway for e-commerce website for fitness consultant to sell organic health and wellness products.

## OTHER PROJECTS

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- July 2016 – June 2018 Medicare Cards, Major Project for B.Tech. at NCU
- Developed android application to store medical history of individuals using Firebase. Also, designed API to access this information using Near Field Communication (NFC) cards.
- July 2014 – Nov 2014 Developed login and update feature for a Student Information System.

## TEACHING EXPERIENCE

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### Department of Computer Science, OSU

- Jan 2019 – Sept 2021 Teaching Assistant
- Taught graduate and undergraduate level courses:  
CS527 Error-Correcting Codes  
CS381 Programming Language Fundamentals  
CS362 Software Engineering II

## PUBLICATIONS

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- Adaptable Traces for Program Explanations (Under Review)  
*Divya Bajaj, Martin Erwig, Danila Fedorin, Kai Gay*  
*Asian Symposium on Programming Languages and Systems (APLAS 2021).*
- A Visual Notation for Succinct Program Traces  
*Divya Bajaj, Martin Erwig, Danila Fedorin, Kai Gay*  
*Proceedings of IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC 2021).*

## PEER – REVIEWED CONFERENCES

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- *Proceedings of IEEE Symposium on Visual Languages and Human-Centric Computing 2021*
- *Symposium on Implementation and Application of Functional Languages 2020*
- *Proceedings of IEEE Symposium on Visual Languages and Human-Centric Computing 2020*

## RELEVANT SKILLS

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- Knowledge and experience in language design, domain-specific languages, type systems and operational semantics.
- Extensive programming experience in C, C++, Haskell, Java, and Python.
- Some familiarity with HTML, CSS, PHP, Idris, Bootstrap and Shell scripting.
- Proficient in Visual Studio, Linux and Unix environment.

## SELECTED HONORS & AWARDS

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- Jan 2019 – Sept 2021 Research and Teaching Assistantship (full tuition & stipend), OSU
- Dec 2017 Gold Medal for university-wide securing first position in B.Tech., NCU
- July 2013–June 2017 Scholarship for securing first position in B.Tech., NCU