

# Eduardo Chavez

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## EDUCATION

**Bachelor of Science, Computer Science**  
University of California, Santa Cruz

September 2016 – June 2019

**Associate of Science, Mathematics, Physics and Pre-Engineering**  
El Camino College, Torrance, California  
Dean's List: Fall 2013, Fall 2014, Spring 2015, Fall 2015

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February 2011 – June 2016

## COMPUTER SKILLS

Operating Systems: UNIX, Microsoft, macOS  
Languages: C, C++, Python, Java, JavaScript, PostgreSQL  
Tools: GDB, GitHub, Visual Studio 2015, VS Code

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## EXPERIENCE

**MESA (Mathematics, Engineering, Science Achievement) Program Specialist**  
El Camino College, Torrance, California

October 2018 – Present

- Improve and automate database updates to ensure the accuracy of data for future state reports
- Engage and support first-generation community college students pursuing higher education in STEM fields

**Computer Science Tutor**

October 2018 – March 2019

El Camino College, Torrance, California

- Reinforced students' understanding of computer science fundamentals, data structures, and object-oriented design
- Assisted students with finding efficient ways to solve programming assignments and generate code

**Research Intern, Transfer Student Summer Research Program**

June 2015 – August 2015

University of California, Los Angeles

- Analyzed the impact of image formats on flash storage efficiency using applications developed in C++
- Created presentations on a biweekly basis to share research progress with mentor and PI

**CNC (Computer Numerical Control) Machine Programmer/Operator**

August 2011 – February 2013

Space Lok, Inc., Gardena, California

- Programmed Haas/Okuma CNC 2-axis lathe machines to manufacture metal fasteners, nuts, and washers
  - Adjusted and operated machines in accordance with given blueprints to maintain high product quality
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## TECHNICAL PROJECTS

**Database Management System Design**

- Implemented a relational database management system in C++ which uses a paged-file system to handle operations on records, tables, and B+ tree indexes
- Designed a query manager to handle relational selections, joins, condition-based updates and delete operations

**Guitar Multi-Effects**

- Developed a modularized application in Pure Data to modify guitar audio input
- Implemented a headless Raspberry Pi to run guitar multi-effects application to provide the user with a low cost alternative of purchasing multiple guitar pedals

**Reverse-Polish Calculator**

- Implemented in C++ which involved overloading integer operations to perform arbitrary precision integer arithmetic in the style of the Unix operating system command, dc (desk calculator)
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## AWARDS

**National Science Foundation (NSF) Scholarship Recipient:** Fall 2014, Fall 2015

- 2x recipient for NSF Scholarship based on strong academic standing and level of participation in MESA (Mathematics, Engineering, Science Achievement) and SSS-STEM (Student Support Services) programs
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## RELEVANT COURSEWORK

Analysis of Algorithms	Comparative Programming Languages	Advanced Programming in C++
Compiler Design I	Database Systems I & II	Operating Systems
Computational Models	Algorithms & Abstract Data Types	Computer Architecture

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## ADDITIONAL SKILLS

Languages: Fluent bilingual in Spanish