

Burak Biyikli

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Education

- 📅 2018 - 2022, B.S. Electrical Engineering, **The University of Texas at Austin**, GPA: 3.82, University Honors
- 📅 2021 - 2022, B.A. Mathematics, **The University of Texas at Austin**, GPA: 3.83, University Honors
- 📅 2016 - 2018, High School Dual Credit, **Austin Community College**, GPA: 4.00, Presidential Honors
- 📅 2014 - 2018, High School, **Harmony School of Political Science**, GPA: 4.26, Valedictorian

Work Experience

Custom Power Products (CPP) Intern Texas Instruments (TI)

📅 May 2021 - August 2021

📍 Santa Barbara, California

- Created a program to quickly (~1-30 seconds) and automatically parse, process, modify, and view large simulation databases (+200GB uncompressed).
- Interacted with engineers from client companies, which required strict NDAs.

Teaching Assistant

📅 January 2021 - December 2021

📍 Austin, Texas

ECE Department of UT Austin

- Assisted students in an upper division Embedded Systems class in creating projects such as: haptic feedback enabled computer mice, a voice assistant, and an MP3 player.

Central Analog Engineering (CAE) Intern

📅 May 2020 - August 2020

📍 Dallas, Texas

Texas Instruments (TI)

- Collaborated with teams outside of CAE to add features and automation to TI's test engineering flow. Also helped organize a small team of interns on two projects.
- Validated TI's new 'simulation for test' flow by writing a test program for a new low I_Q LDO using C++ running on a virtual Eagle ETS-88 Test Platform
- Developed Verilog, Verilog A, Verilog AMS, and System Verilog files based on Allegro schematics for TI's ETS-88 standard hardware in order to remove barriers to tool adoption
- Researched, characterized, and ported several graph-based Natural Language Processing algorithms in python to learn their suitability for use in schematic analysis

ATE & SLT Intern

📅 May 2019 - August 2019

📍 Austin, Texas

Advanced Micro Devices (AMD)

- Worked in SLT (Silicon Level Test engineering) and ATE (Automated Test Equipment) team where I gained experience while working on production code and Advantest Testers including Verigy's Handlers, Firmware, APIs
- Created automation scripts, including one that corrected limits within the test program using Python and Bash
- Wrote test code in Smartest using C++, Python & Advantest Firmware Commands to add features and enable test time reduction. Test time improvements had value up to a quarter-million dollars in the subsequent quarter
- Worked on real & simulated test equipment that was based on Red Hat Enterprise Linux

Central Engineering Intern

📅 May 2018 - August 2018

📍 Austin, Texas

Silicon Labs (Silabs)

- Automated the simulation of the current, voltage, and capacitance of devices corresponding 1:1 with existing raw data
- Used Python to process both measured and simulated data. Worked with SpectreMDL, SKILL, and Ocean in order to accurately simulate devices. Created visualization tools
- Created new tools to dynamically explore and visualize large data sets
- Worked with a small team of engineers to set and meet developmental milestones

Software Development Intern

📅 May 2017 - August 2017

📍 Austin, Texas

Vast.com (Vast)

- Utilized existing databases to both create predictive models for pricing and generate reports for users.
- Set up and maintained backend infrastructure, including the integration of existing APIs and server/DNS management

Research/Teacher's Assistant

📅 May 2017 - June 2017

📍 Austin, Texas

Summer Advanced Research Camp

Apprentice Electrician

📅 May 2016 - June 2016

Elk Electric

📍 Austin, Texas

Skills

Note: Filled Circles denote moderate or greater usage in a given setting.

	Personal	Academic	Professional
Python	●	●	●
C/C++	●	●	●
Java	●	●	●
Linux / RHEL	●	●	●
Git / Bitbucket	●	●	●
Vivado / Verilog	●	●	●
Virtuoso/VerilogA	●	●	●
System Verilog	●	●	●
Eagle	●	●	●
Mathematica	●	●	○
TensorFlow	●	●	○
Swift/Xcode	●	●	○
ARM/Thumb	●	●	○
x86	●	○	○
Azure	●	○	○

Projects

Custom CPU

- Created a custom 8-bit CPU, designed at the transistor level. Similar in capability to a MOS-6502 processor

3D Graphics Engine

- Written to use less than 32kb for RAM+ROM in order to run on a microcontroller
- Rewrote existing graphics library to reduce overhead by taking advantage of LCD's capability

Achievements

- Three time international science fair Finalist and Silver Medalist, Projects on neural networks and solar power
- Scored in the top 200 in the statewide American Math Competition
- Perfect score on the AP Physics, SAT Physics and AP Computer Science exams
- Commended Score on the PSAT/NMSQT and AP Scholar with Distinction Award from the College Board