Dante Vasudevan

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EDUCATION

M.S. in Semiconductor Engineering, Northeastern University – Boston, MA **09/2025 – 05/2027**

- Concentration in Devices and Nanosystems
- Relevant Coursework includes:
  - Micro and Nanoscale Manufacturing, Photonic Devices

B.S. in Electrical Engineering, University of Illinois – Urbana, IL **Graduated 05/2024**

- Recipient of Samsung Technology Track Scholarship
- Relevant coursework includes:
  - Semiconductor Electronics, Semiconductor Device Fabrication, Photonics, Optics, Plasmas, E&M Fields and Waves 1 and 2, Digital Systems (FPGA Course), Analog and Digital Signal Processing, and Microelectronics (Small-signal analysis)

High School Degree, Willow Glen High School – San Jose, CA **Graduated 06/2020**

- FIRST Robotics
  - Designed a robot to launch balls, lift itself, and spin a colored wheel
- Relevant coursework includes:
  - Integral and Differential Calculus, Multivariate Calculus, Chemistry, and Physics Mechanics

EXPERIENCE

Student Research, Electrical Engineering – University of Illinois **08/2020 – 05/2024**

- NIR VCSEL Research supervised by Prof. Kent Choquette
  - Performed Near-Field and Far-Field Characterization on Coupled Photonic Crystal VCSELs across a range of current injections to search for the in-phase and out-of-phase supermodes
  - Built a Model of Coupled Index-Guided VCSELS to analyze the fundamental gaussian modes and identify ideal design parameters
- Worked in a Class 1000 Clean Room
  - Built BJTs, Diodes, and FETs on silicon wafers using fabrication techniques (Oxidation, Photolithography, Etching, Ion Diffusion, and Metallization)
- Control Systems Research under Yogi Patel
  - Modeled and Built an Inverted Pendulum using LQR Feedback that stabilized within 2 seconds
  - Presented Poster at PURE Symposium

Intern/Engineer, ASIC Design – Auradine **06/2023 – 08/2023**

- Performed PVT timing analysis using foundry SPICE models across various technology nodes to determine the best performing process for ASIC fabrication.
- Performed IR Drop Analysis and PDN Simulations with PowerDC to identify potential hotspots or large power losses within the ASIC
- Explored thermoelectric power reduction ideas for the system to reduce power consumption

Intern/Engineer, Robotics – Ford Motor Company **05/2021 – 08/2021**

- Developed a low-cost testing platform for autonomous vehicle interaction with Game Theory Algorithms
  - Built low-cost vehicles fitted with automatic line-following, to be used to test the various algorithms
  - Built a ROS2 Framework to support communication, mapping and localization, and negotiation

SKILLS

Software:	Python, MATLAB, Linux, ROS2 Foxy, Image Processing, Git	
Electronics:	HSPICE, LTSPICE, KiCad (PCB Design), KLayout (PIC Design), Lumerical, PowerDC	
Tools:	Spectrometer, OSA, SPA, Oscilloscope, Soldering	
Languages:	**English:**	Native
	Spanish:	Professional fluency (ILR Level 4 / CEFR C1)