

PRATUL VENKATESH

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PROFESSIONAL SUMMARY

Physics research and development engineer with skills in electronics design, microelectronics, laser photonics and software full-stack development. Developed several projects in semiconductor chip fabrication industry achieving improvements in efficiency, quality, consistency, and usability. Experienced in working and living in different countries and cultures. A skilled generalist with excellent writing, communication, and business development skills.

EDUCATION

Nanyang Technological University, Singapore

2020 – Present

B.E. Electrical and Electronic Engineering with a Minor in Physics

CGPA: 4.01

WORK EXPERIENCE

Process Engineering Intern

January 2023 – July 2023

InchFab, Inc.

Sunnyvale, California, USA

- Designed a plasma magnetic confinement system improving efficiency and consistency of wafer deposition and etching machines.
- Designed a radio-frequency phase shifting signal generator circuit and PCB.
- Operated PECVD & RIE machines, optical metrology tools for wafer inspection and wafer spin-coating.
- Programmed various software and firmware protocols, interfaces, and data analysis scripts.
- Implemented IoT sensors and remote monitoring dashboard.
- Contributed to design and development of company SQL database software for wafer process logging.
- Assisted in start-up operations ranging from training new team members to networking at various events.

Research Assistant

August 2021 – January 2023

The Nam Research Group

Singapore

- Researched and developed strain engineered two-dimensional materials to create single photon emitters for photonics based quantum computing processors.
- Developed optical bench set-up for laser photonic sample excitation and measurement of spectrum, lifetime and second order correlations.
- Presented research poster at Photonics@SG 2022 conference by LUX Photonics Consortium.

HONORS AND AWARDS

1st Place – Undergraduate Research Poster Competition

August 2023

NTU DISCOVER URECA 2023 Poster Competition

NTU President Research Scholar

August 2022, August 2023

SKILLS

Languages English, Chinese (Mandarin), Hindi, Telugu, Kannada, Tamil.

Tools VacTran, COMSOL, FEMM, TCAD TSUPREM-4, LabVIEW, Blender, KiCAD, LTspice, MySQL, Excel, 3D Printing, Surface Mount Soldering, Product Machining, Adobe Photoshop, Adobe Illustrator, Sony Vegas Pro, C, C++, Python, Java.

COMMUNITY & LEADERSHIP

Executive Committee President, Ballroom Dancing Club Led a ten member committee, achieved significant club growth through restructuring, and successfully organized ballroom dancing workshops for over hundreds of participants.