
EDUCATION

Yale University (CT, USA)

BS Engineering Sciences-Mechanical

(2016)

Coursework: Population Studies, Health Financing, Global Health, Product Design, Ordinary and Partial Differential Equations, Linear Algebra, Multivariable Calculus, Mathematical modelling, & East Asian Studies.

Senior Thesis: "Optimizing 2D image to 3D model software (123D Catch) for use in mapping residual limb morphology in amputees"

对外经济贸易大学 -University of International Business and Economics (Beijing, China)

Duke University Intensive intermediate Chinese language study program

(2013)

WORK EXPERIENCE

DIT Design Studio Manager

Rice 360 Institute for Global Health (DSM, TZ)

(06/2019-present)

- × Manage operation of 950+ member university makerspace which includes overseeing material procurement, machine maintenance, member outreach, external partnerships, and technical skills classes.
- × Mentored 110+ student projects from ideation phase through to need responsive functional prototype.
- × Engage & assist university faculty with incorporation of active learning into existing curriculum.
- × Co-wrote university's inaugural BS Biomedical Engineering curriculum.
- × Build & manage member information management system which has automated unique member ID card generation & collation of reporting data. System currently in replication at other Design Studios.
- × Establish & maintain strategic partnerships with local NGOs, hospitals & hubs.

Engineer I

Building Momentum (VA, USA)

(01/2018-02/2019)

- × Instructed 100+ active duty US Marines, children & educators in product design fabrication techniques such as Computer Aided Design, 3D printing, lasercutting, robotics, welding & Arduino programming.
- × Conducted product development and fabrication services for clients and designed devices such as autonomous robots, unmanned aerial vehicles, sensor units & museum exhibition replicas.
- × Built entire data collection, analysis & visualization system that automated key processes.
- × Led curriculum redesign of flagship military technology training program.

Middle School Teacher

Pierrepont School (CT, USA)

(08/2016-12/2017)

- × Designed & implemented elementary school Computer Science curricular towards teaching object oriented programming to 3rd grade students.
- × Prepared & delivered experiential learning classes with demonstrations & experiments geared towards spurring curiosity & achieving Science outcomes.
- × Co-authored & co-taught school's first Sexual & Reproductive Health Curriculum.

Student Technician

Yale Information Technology Services (CT, USA)

(12/2013 – 05/2016)

- × Troubleshoot & repaired software & hardware defects in Yale students' personal computers for 8 hours per week, servicing on average 15 clients each week.
- × Trained new Yale students in personal computer literacy, maintenance & Yale Information Technology Services norms.
- × Advised students on Yale online resources, data backup options & personal computer management.

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SKILLS

DESIGN	Rapid prototyping Concept generation Computer Aided Design Static and Motion Analyses Computer Aided Manufacturing RF Communications (Xbee)
FABRICATION	Vinyl cutting MIG Welding 3D printing Laser-cutting Woodwork Metalwork Plasma Cutting Printed Circuit Board Design & Milling Fiberglass & Gel application
PROGRAMMING	Arduino MATLAB JavaScript C
LANGUAGES	Native: English, Shona, Northern Ndebele Conversant: Chinese (Mandarin) Basic: Swahili

REPRESENTATIVE DESIGN PROJECTS

Mkono 1 – Independent Project (2021). Designed 3D model, electronics & initial code for Mkono-1, Tanzania's first myoelectric prosthetic arm. Device shortlisted for Royal Academy of Engineering Sciences Prize 2020.

Muhimbili National Hospital (2020). Led construction & validation of Tanzania's first UV Germicidal Irradiation Unit for disinfection (and reuse) of N-95 masks for Pediatric Oncology Ward. Pending regulatory verification.

Building Momentum (2018). Designed & built generator monitoring system prototype for Camp Lejeune. System included sensor units remotely communicated generator health information to central handheld unit.

Building Momentum (2018). Modelled & manufactured replicas of Spy Museum exhibit models with American Disability Act Standard Braille for improved accessibility of museum's exhibitions.

FieldReady (2017). Deployed to US Virgin Islands within 48 hours of hurricanes Irma & Maria. Created power hubs for remote island residents without electricity access by upcycling damaged solar panels.

FieldReady, (2016). Designed and 3D modelled emesis basin to be 3D printed & used by medical practitioners in disaster settings. Product was fabricated in Nepal & used to meet medical supply chain deficits.

Sanergy (2015). Fabricated & tested a 180L Human Waste Transfer & Consolidation system in conjunction with Humanitarian Innovation Fund (HIF) for rapid deployment in refugee camps to improve WASH outcomes.

CONFERENCE PRESENTATIONS

Taylor, A., Gobin, A., Mitaro, E., Moyo, W., **Jenjezwa, J.**, Lodzanyama, H., Sanyahumbi, D., Mirabal, Y., Vweza, A., Chilipa, R. and Mafuta, M., [Reimaging Experiential Learning in Global Health: Implementation and Assessment of a Bidirectional, Virtual Exchange Program for Undergraduates](#). In *CUGH 2021 Virtual Conference*. CUGH.

Doshi, H., Duffy, T.C., Friedlaender, L., Honan, L. and **Jenjezwa, J.**, 2016. [Creative Collaborations with Art, Music and Engineering: Improving the Perceptual Abilities of Novice Clinician](#). *Yale Tech Summit*.

Brooks J, Doshi H, Jameson C, **Jenjezwa J** and Thunell C, [BeatBox: A Novel Device for More Realistic Pulse Simulation](#), *University of Minnesota Design of Medical Devices Conference – Student Design Showcase*

SPEAKING & MENTORSHIP

[Innovation Week Tanzania 2021](#) | SPEAKER / PANELIST | Rethinking Development in the 21st Century: *Making in Tanzania – Makerspaces as the cornerstone of the innovation ecosystem*

[VentureWell Open Conference 2021](#) | SPEAKER/CO-FACILITATOR | *Impactful Events Programming Inside of Makerspaces that Support Education*

[Makerfaire 2020](#) | SPEAKER | *Dar es Salaam's Response to COVID-19: Locally distributed 3D Printing Network*

Dar es Salaam Institute of Technology (DIT) Faculty Workshop 2020 | MAIN FACILITATOR | *Active learning*

UNDP Thinker's Campus Series 3 2020 | SPEAKER | *Using 3D Printing in the Fight against COVID-19*

[ABEC Design Competition 2019](#) | MENTOR

Malawi Innovators Design Competition 2019 | JUDGE