

Samreet Singh

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PERSONAL PROFILE

Motivated sustainability engineer with 1 year of experience in the design and evaluation of energy efficient buildings. Skilled in building energy modelling, CFD/microclimatic studies and daylight simulations, with a strong interest in to keep growing in building physics and work towards charterhip.

KEY SKILLS

- Rhino3D and Grasshopper Scripting
- Proficient in Autodesk Revit and AutoCAD
- Strong Project Management skills
- Excellent at liaising with stakeholders
- Beginner knowledge in Data Science in AEC
- TAS Building modelling / Thermal Analysis
- Microclimatic Wind/CFD Studies
- Python scripting (Intermediate)
- Strong understanding of Daylight/Sunlight concepts

RELEVANT WORK EXPERIENCE

06/2022 – Present **Sustainability Engineer**, IN2 Engineering, Ranelagh, Dublin 6

- **Building Thermal Analysis:**
 - Energy modelling for new and retrofit residential, commercial and healthcare facilities with feasible low energy recommendations to clients.
 - Solar gain studies on external facades, natural ventilation modelling and CIBSE TM59/52 Overheating assessments
- **Daylight/Sunlight simulations:**
 - Worked to BRE, EN 17037 and Hamburg city guidelines.
 - In depth Daylight/Sunlight studies for large residential schemes, commercial spaces and design studies for HSE Healthcare facilities.
 - Intermediate knowledge of the core radiance software through its command line tools.
- **CFD / Wind Microclimate:**
 - BRE Microclimate and City of London Outdoor comfort guidelines
 - Conducted microclimate studies for pedestrian comfort on large scale developments and rooftop amenity safety on high rise buildings in central Europe.
- Conducted **R&D** for outdoor comfort workflows and advanced daylighting simulations using grasshopper plugins and custom coded components in Python/C#.
- Effectively **communicating** with Planning consultants, Architects, Clients, and design teams.

EDUCATION

Apr – Jun 2023:	Professional Cert. in Data Science for Architecture, Construction & Eng (Online) National University of Singapore
2018-2022:	2:1 Grade BEng (Hons) Building Services Engineering Technological University Dublin, Bolton Street, Dublin 1, Ireland
2013-2018:	Leaving Certificate Colaiste Pobail Setanta, Phibblestown, Dublin 15, Ireland

INTERESTS AND ACHIEVEMENTS

- **Vice-Chair of CIBSE YEN Ireland.** I have also written and featured an article in the CIBSE Journal (Sept 2022 ed).
- Completed a low-level **machine learning** project on clustering building energy usage anomalies, with energy meter data from the ASHRAE GEP-III data sets.
- Personal interest in **coding and robotics**. I am learning python for data science when I have the time and sometimes build robotic Arduino projects.
- **Sports:** a keen interest in hiking and powerlifting.
- **Travel:** Curious about different cultures and places in the world while also broadening perspectives.
- **College:** Public Relations Officer (PRO), this involved meeting with guests for events, advertising and managing social media for the **TU Dublin Engineering society**.

FINAL YEAR PROJECT

Final Year Design Project: **Building design, load optimization/analysis and system selection**

- Objective: **to gain exposure to the design process and practical engineering** design work undertaken in a major building project within a multi-disciplinary environment.
- Completed a **building load analysis and optimisation** with calculations and IES simulations for things such as heating, cooling, and electrical.
- **Selected systems and constructed drawings and schematics** using Revit and Autocad for water services, AHU zoning, fire services, electrical calculations/diagrams, and more.
- A **full detailed design report** was made with the building design brief, a schedule and list of data sheets, system selection justifications, and all drawings/schematics.
- The project is completed on a fully electrical, multi facility office building.

References

Available upon request