Product Design Research Opportunities Archive

2023

Enhancing security of agro/food processing factories, in the Sub-Sahara (SSA) region applying IoT technologies (E-Farm/IoT-System)

Development of an interactive mapping tool to allow rapid environmental analysis

3D design of an extensive temporary roof structure

Design and production of software for diversity and inclusion assessment to assist in D&I strategy development in the corporate world

Development of an MVP for an eSport social and personal development platform

App with facial recognition and fingerprint technology to allow new and existing customers to purchase off-the-shelf corrugated packaging for the next day delivery

Design and build adult-centred accessible play equipment

Development of a prototype (Air Bar) ready for testing and to ascertain the efficacy of performance

Develop a data management platform and integration of processes

To produce CAD models for a new sauna product entering the market

3D design of an extensive temporary roof structure

Development of a prototype – PPV CCTV streaming

To create a database and reporting function for an event and hospitality business, with reporting functions on carbon emissions

2022

Accelerate the automated battery technology for faster guidance and to develop an algorithm which calculates the central axis of misshapen components

Design and develop an online marketplace and fulfilment platform

3D print project to produce a series of parts and clamps used to seal fuel tanks

3D printing project to develop a prototype for use ahead of final phase testing

Designing a 100% recyclable atomiser to be utilised in existing golf cleaning spray bottle product

Development of a marketplace for the recruitment industry, similar to Fiverr, the online marketplace for freelance services

Designing and creating 3-D printed prototypes of zero gravity vertical farming equipment

Research, development and testing for a hands-free RF and RFID technology

Production of a technically accurate visual (animated/video) representation of how the company's new, innovative products compare to traditional products and methods used in construction

Utilising Artificial Intelligence to improve the effectiveness of alternative dispute resolution within the home improvement market

Development of a digital strategy which includes branding, market messages, functionality and a second phase to include development of app to support Afro Caribbean businesses and consumers

Enhancing security of agro/food processing factories, in the Sub-Sahara (SSA) region applying IoT Technologies (E-Farm/IoT-System)

Development of a dashboard and database to assist a university to gain a deeper understanding of students, which can lead to better student engagement and completion rates

Development of an MVP for a new to market learning and social platform for children

EV charger facia and materials re-design to incorporate recycled materials

Design and prototype of a removable Li-ion battery inclusive of housing and charger for a high-end electronic hygiene chair

New innovative cyber security product protecting vulnerabilities in smart devices within the residential home and remote workers for enterprise businesses

Transformation and digitilisation of the traditional commercial cleaning industry, promoting a newer, eco-friendly and carbon neutral way of operating

Develop a compelling visual representation for a new and innovative digital gateway and platform

Creation of a range of visualisation tools to engage new potential wholesale export customers

Personal care product dispenser made from compostable plant fibre composite material

Development of a digital material management platform to minimise vehicle movements between live construction sites

Developing a software algorithm for use in a taximeter to accurately calculate the cost of a journey

Software for PAT testing to eliminate manual data entry, automate data input, reporting and invoicing

2021

BIM consultancy seeks partnership with specialists to develop novel software

Enhanced development of Innovative new product to be used in construction and domestic environments.

Low carbon technology monitoring app, providing commercial and residential customers real-time updates on their system's performance

Developing a new cost effective and scientifically validated method of "at home" TV ad testing

Development of commercialisation strategy for new electric vehicle charging channel

Electric vehicle (EV) charge point project: to enable multiple EVs to be charged at a single public location

NFC enabled medical jewellery project: wearable medical information device to allow first responders to access critical health information of an unresponsive wearer/patient

Sustainable footwear: designed for the leisure and hospitality sector, to reduce marine pollution

The enhancement and development of the product case for electronic components used in penetration testing exercises

Design and development of a prototype to support lash technicians within the beauty industry to apply lashes to their customers

Reusable and sustainable take-away hot drinks cup CAD model and 3D prototype

Magnetic embossing split block system

CAD drawings for EcoHug, a sustainably produced mobile phone holder

Design and prototype a fully working training shoe which incorporates a patented modular design that can be used to take to manufacturers and also to demonstrate the product to investors

Design and build of an algorithmic profile matching engine to help make hiring in the legal industry easier and more cost-effective

Proof of concept development for an in-line gas flow sensor device

Development and 3D print of a prototype lamp with colour changing affects to impact on behaviour and develop understanding, aimed at the 0-5yr age group

To add IOT functionality to current range of advanced panel meters (APMs)

Lean process improvement of tank line: research, design and testing project to improve efficiencies and reduce environmental impacts

Design an affordable cold tub for people to use at home – in line with the Wim Hof method – in order to readily access the health benefits of cold water therapy

2020

To develop an innovative machine learning algorithm to categorise tender data

Design and prototype a VR sensor holder shinguard for a football virtual reality simulation

To prototype 3D printed parts for an electric motorcycle that will utilise new additive manufacturing technologies

Design a composite antenna

Injection moulding processes and further research into cost effective alternatives using 3D printing in composite tool materials

Design and testing of materials and structures for safety helmet applications using manufactured (3D printed) auxetic structures

3D prototyping of components forming part of aluminium balcony systems for the construction industry

Design and manufacture of animation puppet 'Hand Paddle' utilising rapid prototyping technique

Production of an innovative universal security locking mechanism for roller shutter system for bike sheds using CAD and 3D print

Customised report feature development– information architecture design/logical modelling, UX design and working prototype proposal

Creating dimensional drawings for a wide range of dental instruments, with the potential to digitalise the company's design and customisation process to provide an innovative new design and development service

Online purchasing portal for businesses for sale and performance prediction tool

Design and prototype a detachable mechanism to enable the upper and sole of footwear to be separated and recycled

Design and prototype a new connector valve for a portable oxygen supply solution

Legal sector mobile application development for case management/storage

Design and prototype a new mobile cloth hanger

Design and prototype a new time code clapper board

To produce an IOT prototype camera connected to an app that provides live streaming, cloud storage and proximity detection; this is to be used to deter and prevent the theft of tools from trades vehicles

Brand creation of new to firm high caffeine content coffee product

Digital brand development, digital asset creation – including website, marketing collateral and digital marketing strategy for two segmented target markets

Designing an innovative communication strategy that will include development of new digital content and key messages for use in communication with marketing to new global clients and sectors

VisualPodHistory app development: an education resource for undergraduate and qualified podiatrists to assist with learning and developing confidence and competence in MSK (initially) clinical history taking

Design and prototype a new injection moulding tool from 3D printed composite materials

Prototyping CAD/3D printing: PC raiser for laptop users; ergonomic design for comfort, flexibility, protection and portability

Design and prototype an inline alarm system to detect the flow of oxygen within medical and portable oxygen solutions

Design and prototype a deaf-friendly face mask which incorporates a clear vision panel to aid lip-reading

Design and develop (hardware & software) and assist with trials and testing for a prototype autonomous drone

Development of a bespoke learner management system with enhanced biometric security features

Develop a digital workflow for 3D scanning and 3D printing patterned rollers

Linear inertial energy transduction (LIET)

Design and prototype a sustainable luxury clutch bag fashion accessory

UI and UX re-design and layout of a data workflow SaaS system

Evaluating and assessing educational and psychology programme against best practice and existing research to inform onward development

Vertical farming wide-spectrum LED project

Development and build of a mountable dynamic wide-spectrum (360-800nm) photosynthetically active radiation, circuit on board, light emitting diode

Research appropriate materials for the design and development of a medical device for endoscopy (advanced material 3D printing project)

Design and develop innovative electric and pneumatic robot grippers

SME seeks partnership with university to develop innovative mobile application that will facilitate touch-free, remote selection of vended goods and efficient payment, compatible with a range of vending machines

Proof of concept project: a platform (website and app) to change the way wealth Is passed on through generations

Support from a university/ies to digitise a community interest company's service and product offering in light of COVID-19 social distancing restrictions. They are also looking to develop an innovative, low-cost method for recycling bicycle tyres and inner tubes into value-added products, such as rubber matting

Virtual clinicians (software and algorithm development)

Design an efficient match-making platform and AI bot for connecting young people, children (and their parents) with the right mental health professionals/therapists

To develop a mobile app that will communicate with a healthcare IOT device

Collaboration to produce a 3D printed head/mould that allows intubation training using bariatric (obese-sized) mannequins

The support of a university to further develop an innovative start-up's patented, geared manual propulsion devices for wheelchairs. They are looking for 3D CAD drawings, prototyping and design-for-manufacture, with a particular focus on perfecting the gearbox

Design of all-terrain mixing wheelbarrow

Develop online learning platform content

Exploration of 3D print and moulding for new modular off-site washroom concept

2019

Support in writing a suite of management development and personal development books

Software development and testing for real time data integration

Predictive modelling using a cleaning system's data analytics to improve product quality

Diagnostic software development for rainwater harvesting

Development of a novel 3D point of sale display system

Review the design and materials used for a headrest and 3D print prototype

Technical design to produce a 3dDprinted models of a range of fibre/paper-based containers from 5ltr to 20 ltr

Product development of new materials and testing of industrial safety helmets

Product development of an offline tool into a digital app

UX, development and testing of a cloud based application

Product development of an AI application into a video based predictive model

Prototype and working MVP of a subscription box product

Develop a design and prototype for a new method of footwear lacing

Design and prototype a new plastering tool to improve working efficiency

Support around the design and development of two new products; one a combined speaker/light/detector for residential applications, the other a new 180 degree covert outdoor detector for commercial applications

Assistance required will cover final stage design for the casings of both products, including concept drawings, renderings, 3D CAD files, mechanical drawings and 3D prototyping

3D printing

Innovation in design and materials: ceramics/ pottery and eco range product development (bathroom and wetrooms)

Innovative 3D printed prototype intended to be manufactured by injection moulding processes and further research into cost-effective alternatives

To finalise designs and build a working prototype of the farm and the consumer facing product

Design and develop a prototype housing unit to hold a walking cane locating device, the housing unit will retrofit onto an existing walking cane. The software and electronics device has already been developed. The device will aid individuals with loss of vision to find their walking cane when misplaced