Alloyed

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Alloyed is a young venture-funded company of 50 world-class metallurgists, mechanical engineers, and software developers working across 3 offices in the UK, one in Japan, and one in California to build the future of advanced metal components. To do this it uses proprietary software packages which combine advanced machine learning and physical modelling to invent better alloys, devise better ways to process them, and design better 3D-printed components.

Alloyed has business in the Aerospace, Automotive, Electronics, and Medical markets, and its products span from parts of rockets to orthopaedic implants via parts for consumer electronics. Its customers are among the biggest companies in the world in their sectors. Priorities for 2021 include bringing online the UK's first certified production facility for 3D printed custom ankle implants, getting a new alloy for turbochargers to market, and having one of its components designed into a virtual reality headset.

Apply

Submit a CV and cover letter explaining how you meet the criteria to jobs@alloyed.com. Applications are reviewed on a rolling basis and interview slots are limited, so we encourage candidates to apply early.

Final deadline: 28/02/2021

Virtual interviews for graduate roles and internships will be held in March.

Design Engineer

Oxford | Interns, Graduates | Design for AM | Lab-based research

Using the design freedom offered by additive manufacturing, combine engineering and materials know-how to create components for a range of industries. Navigate trade-offs between performance, reliability, and cost, to produce novel parts at R&D and pilot-scale. Example project: Producing pilot-scale runs of generatively-designed micro-turbine wheels.

Additive Manufacturing Engineer

Stone | Interns, Graduates | Design for AM | Lab-based research

Deliver production processes primarily focused around additive manufacturing - taking cutting edge designs and world class materials expertise from around the business into production. Generate a deep understanding of manufacturing processes from raw material to finished component. Example projects: Develop high-volume production processes for a leading consumer electronics provider; manage and develop a pilot manufacturing process for a rocket nozzle built in a novel alloy.

Orthopaedic Design Engineer

Oxford | Interns, Graduates | Design for AM | Lab-based research

Work with Meshworks, Alloyed's custom orthopaedic implant subsidiary, to design and validate its new custom additively manufactured implants. Contribute to strategic and commercial decisions around market entry routes, intellectual property, and technical focus. Example projects: Designing new ankle implants incorporating real-time surgeon feedback via webex; running test programmes to assess new biocompatible alloys and printed lattices.

Computational Science & Engineering

Oxford | Interns, Graduates | Design for AM | Data Science

Apply mathematical, materials and multi-physics principles to model, simulate, and analyse performance of alloys across a range of applications: electronics, consumer products, automotive, aerospace. Solve complex physical problems arising in engineering analysis and design. Become equipped in advanced computational techniques, programming, numerical analysis, optimisation, and machine learning. Experience of integrated computational materials engineering is beneficial.

Alloy Development Engineer

Oxford | Interns, Graduates | Lab-based research | Data Science | Metallurgy

Explore how alloy composition impacts alloy properties, through computational analysis of thermodynamic databases, literature reviews, and lab experimentation. ADEs create the models on which our Alloys-by-Design (ABD®) software is based. Example projects: Designing new aluminium alloys for a major F1 manufacturer; optimising new 3D-printable platinum alloys for jewellery applications.

Machine Learning / Software Engineer

Oxford | Graduates, PhDs, Postdocs | Data science | Metallurgy

Develop and validate material models by combining the latest advances in machine learning with solid scientific insight. Integrate these models into our proprietary ABD® platform using software engineering design and development best-practices. Previous ML research and software development experience will be a distinct advantage! PhDs and postdocs highly preferred.

Please state which role(s) you would like to be considered for in your cover letter. Graduates will be based at either Oxford or Stone (AM engineer only) but will be given the opportunity to visit other locations for training and projects throughout the graduate scheme.

Graduate & Intern Roles

About you

Alloyed is looking for exceptional scientists with a desire to use their degree in a real-world setting to develop the next generation of high-performance alloys and alloy components.

Successful applicants will be on track for a 2:1 or above, ideally in Mechanical Engineering or a related field, including: Materials Science, Physics or Chemistry. They will be adaptable and organised, able to prioritise multiple workstreams, and will work effectively in a group setting.

A competitive starting salary is offered.

Start dates

Graduate cohorts will start in July 2021, September 2021, & January 2022. Summer internships will run for 8 weeks over July & August 2021.

Find out more

Alloyed will be present at the following careers fairs, and we'd love to meet you!

Imperial College London
Spring Careers Fair (08/02/21 – 12/02/21, time TBC)

University of Birmingham
Internships and Work Experience Fair (10/02/21, 11am-3:30pm)

University of Warwick
Spring Work Experience and Internships Fair (23/02/21, 11am-4pm)

King's College London
Graduate Jobs Festival (24/02/21, 2-5pm)

Queen's University Belfast
Work Experience and Placement Fair (24/02/21, 2-6pm)

University of Oxford
OX and Start-Ups Fair (time and date TBC)

Cardiff University
Internships, Work Experience and Volunteering Fair (time and date TBC)