|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **TOPIC** | **FINANCE – 1ST** | **financE – 2ND** | **EMPLOYEES – 1ST** | **EMPLOYEES – 2ND** | **total** |
| 1.Machine learning astronomy | $817M – SDO [1] | $300,000 – LINNA [2] | 300 [1] | 6 [2] | $817.3M  306 |
| 2.Early galaxy formation | $10B – JWST [3] |  | 1200 [3] |  | $10000M  1200 |
| 3.Dense matter | $1.1B – Linac coherent light source [4] |  | 25 [4] |  | $1100M  25 |
| 4.Muon g-2 | $3B – Fermilab [5] |  | 2160 [5] |  | $3000M  2160 |
| 5.Leptoquark | $4.75B – LHC [6] |  | 2500 [6] |  | $4750M  2500 |
| 6.Precision frontier | $4.75B – LHC [6] |  | 2500 [6] |  | $4750M  2500 |
| 7.Lepton universality | $369.1M – PSI (MUSE) [7] | $75.8M – LHCb [8] | 49 [7] | 1565 [8] | $444.9M  1614 |
| 8.Cosmological model | $268M – Subaru telescope [9] |  | 75 [9] |  | $268M  75 |
| 9.Cosmic microwave background | $412M – CMB Stage 4 [10] |  | 236 [10] |  | $412M  236 |
| 10.Astrobiology | $1.3B – ALMA NASA [11] |  | 286 [11] |  | $1300M  286 |
| 11.High-energy astrophysics | $690M – Fermi NASA [12] | $137M – Department of Energy [13] |  | 541 [12] | $827M  541 |
| 12.Multi-messenger astronomy | $3.5M – CAC [14] |  | 17 [13] |  | $3.5M  17 |
| 13.Quantum computing | $493M – UKRI Quantum [15] | $150M – IBM & Google Quantum [16] | 1000 [14] | 65 [15] | $643M  1065 |
| 14.Nanomedicine | $89.56M – ETP Nanoscience [17] |  | 146 [16] |  | $89.56M  146 |
| 15.Molecular manufacturing | $783.5M – National Renewable Energy Laboratory [18] |  | 2685 [17] |  | $3.83M  2685 |
| 16.New materials | $783.5M – National Renewable Energy Laboratory [18] |  | 2685 [17] |  | $783.5  2685 |
| 17.3D optical displays | $2.8M – Optica [19] |  | 150 [18] |  | $2.8M  150 |
| 18.Photonic integrated circuits | $210M – SBIR NASA [20] |  | 500 [19] |  | $210M  500 |
| 19.Plasmonic sensors | $6.5M – MOLOKO [21] |  | 12 [20] |  | $6.5M  12 |
| 20.Photonic crystals | $2.13B – Max Planck solid state [20] |  | 500 [21] |  | $2130M  500 |
| 21.Photovoltaics | $783.5M – National Renewable Energy Laboratory [18] |  | 2685 [17] |  | $783.5M  2685 |
| 22.Unification of forces | $4.75B – LHC [6] |  | 2500 [22] |  | $4750M  2500 |
| 23.Unified field / string theory | $2.13B – Max Planck Physics [22] |  | 330 [23] |  | $2130M  330 |
| 24.Exotic materials | $383M – SLAC [23] |  | 1600 [24] |  | $383M  1600 |
| 25.Climate modelling | $6.35B – NOAA [24] | $54.074M – Geophysical fluid dynamics laboratory [25] | 321 [25] |  | $6404M  321 |
| 26.Automated theory-building | $3.87B – DARPA [26] |  | 220 [26] |  | $3870M  220 |
| 27.Personalised medicine | $1.3B – NIHR [27] | $660.51M – National Human Genome Research Institute [28] | 1377 [27] | 296 [28] | $1300M  1673 |
| 28.Proton therapy | $512.78M – Curie institute [29] | $128M – NPL [20] | 1258 [29] | 1000 [30] | $640.78M  2258 |
| 29.MRI-guided radiotherapy | $7.3B – NCI [31] | $1.3B – NIHR [27] | 4387 [31] | 1377 [27] | $8600M  5764 |
| 30.Radiopharmacruticals | $7.3B – NCI [31] | $668M – International Atomic Energy Agency [32] | 4387 [31] | 2560 [32] | $7968M  6947 |
| 31.Minimally invasive surgery | $1.3B – NIHR [27] |  | 1377 [27] |  | $1300M  1377 |
| 32.Telemedicine | $2.395B - UVA Health [33] |  | 7000 [33] |  | $2395M  7000 |
| 33. Gravitational Waves | $45M |  | 160 |  | $45M  160 |
| 34. Quantum Key Distribution | $100M |  | 40 |  | $100M  40 |
| 35. Dark Matter / Energy | $3.75B |  | 113 |  | $3.75B  113 |
| 36.Neutron Stars | $3.75B |  | 113 |  | $3.75B  113 |
| 37. Dark Energy Equation of State | $3.75B |  | 113 |  | $3.75B  113 |
| 38. Exoplanet Biosignature | $3.75B |  | 113 |  | $3.75B  113 |
| 39. Exoplanet Imaging | $3.5B |  | 80 |  | $3.5B  80 |
| 40. 2D Materials | $1.65M |  | 300 |  | $1.65M  300 |
| 41. Neural Nanobionics | $944M |  | 48 |  | $944M  48 |
| 42. Nanoelectronics | $944M |  | 48 |  | $944M  48 |
| 43. Nanotechnology | $3.776B |  | 190 |  | $3.776B  190 |
| 44. Nanomaterials | $944M |  | 48 |  | $944M  48 |
| 45. Quantum Photonics | $50M |  | 200 |  | $50M  200 |
| 46. Integrated Photonics | $250M |  | 500 |  | $250M  500 |
| 47. Metamaterials | $64M |  | 142 |  | $64M  142 |
| 48. Plasma Physics | $9.96M |  | 50 |  | $9.96M  50 |
| 49. FLASH Radiotherapy | $56M |  | 13 |  | $56M  13 |

References have been split into those for the finance column and those for the employee column. They can be found at:

<https://github.com/ELHJames/Project/tree/main/Appendix_4_Datasets>.