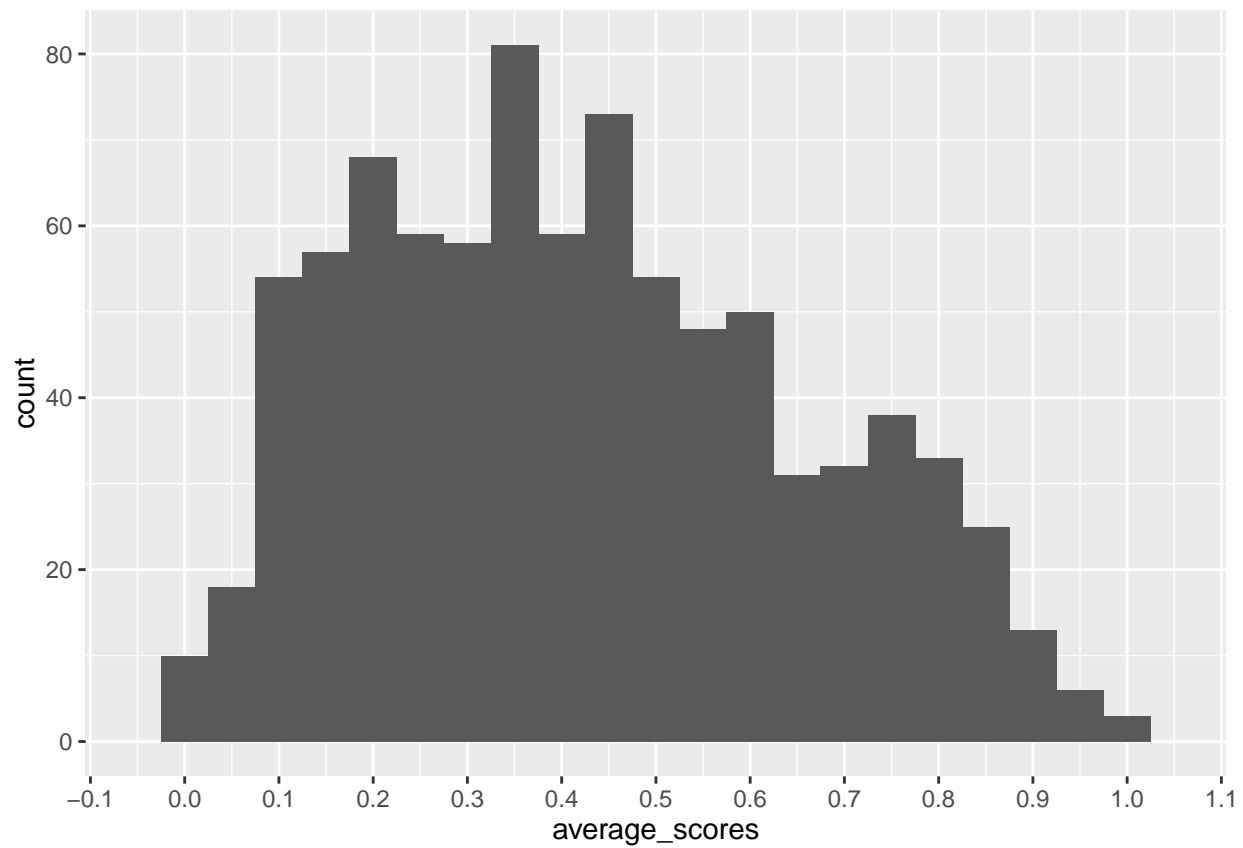


Initial Analysis: Africa Data

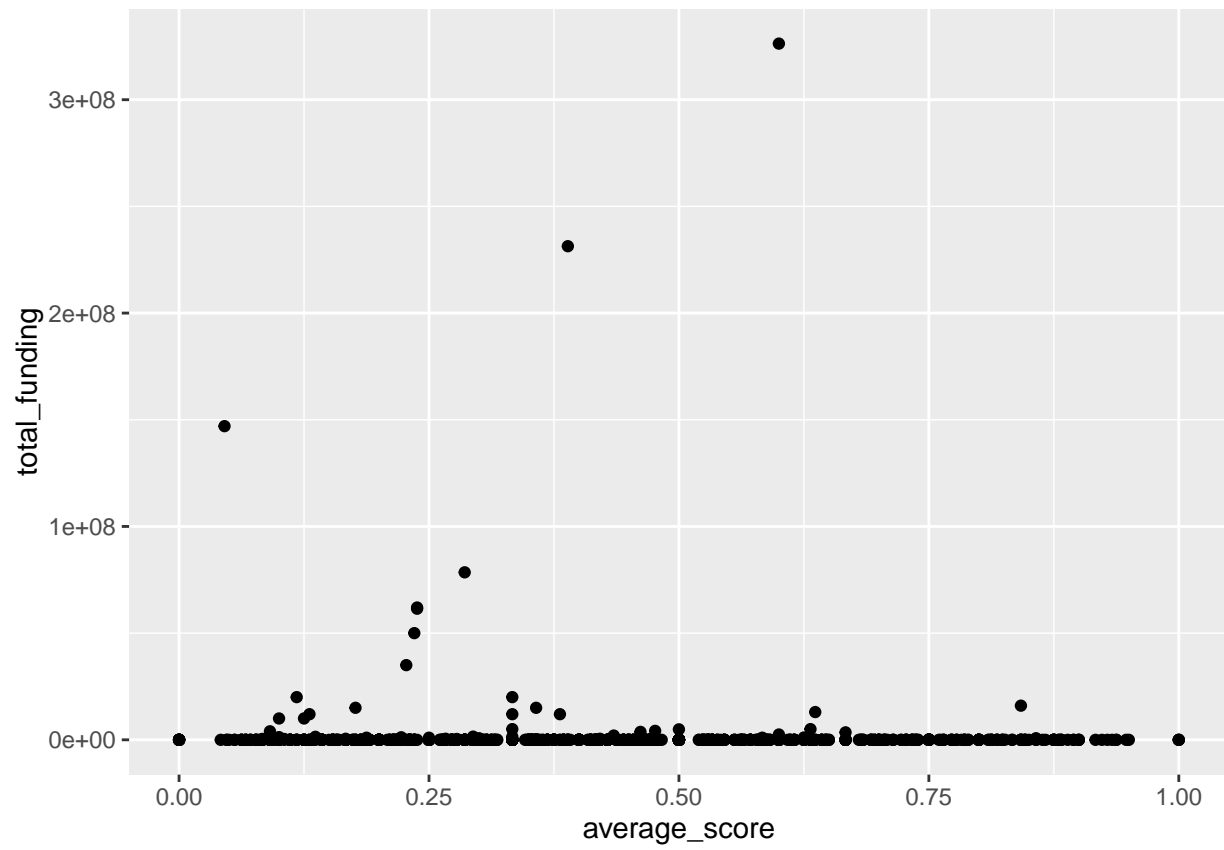
Natalie Carlson

June 7, 2016

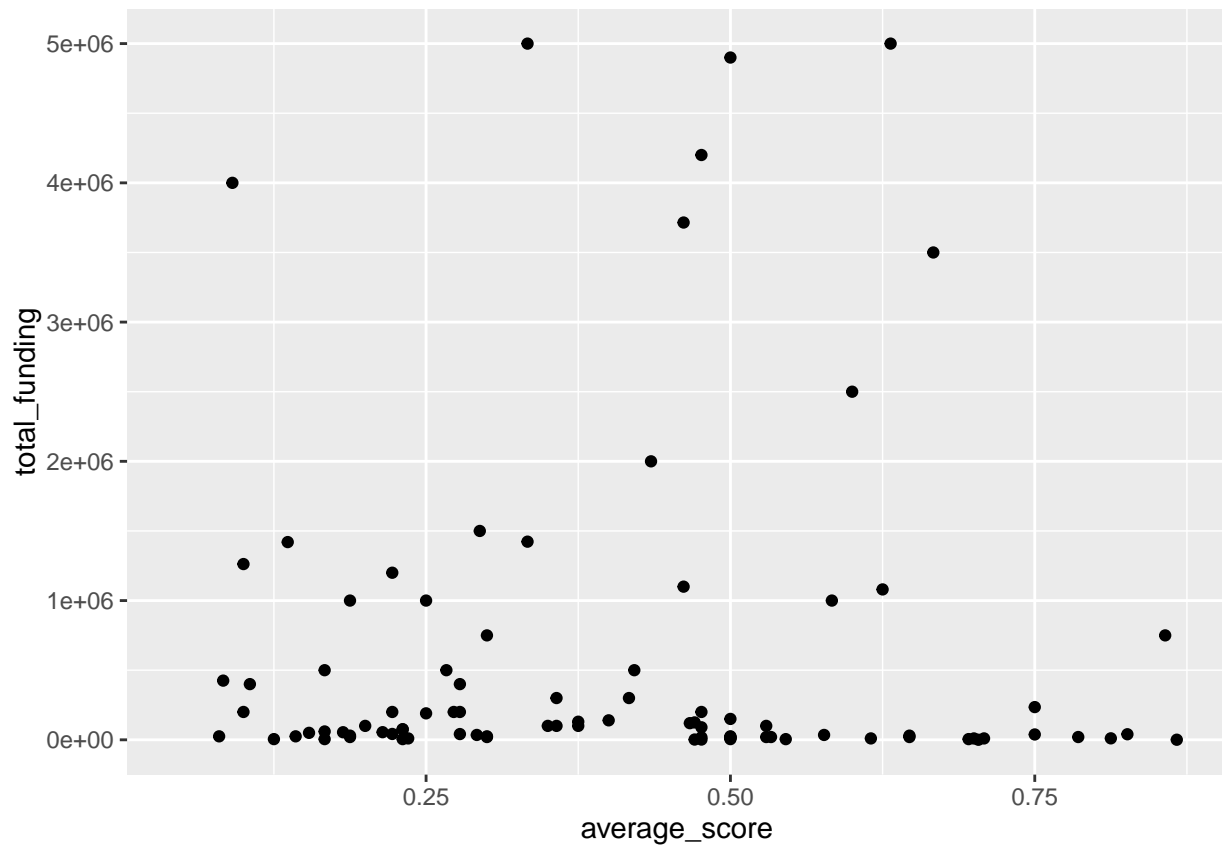
Distribution of Ratings



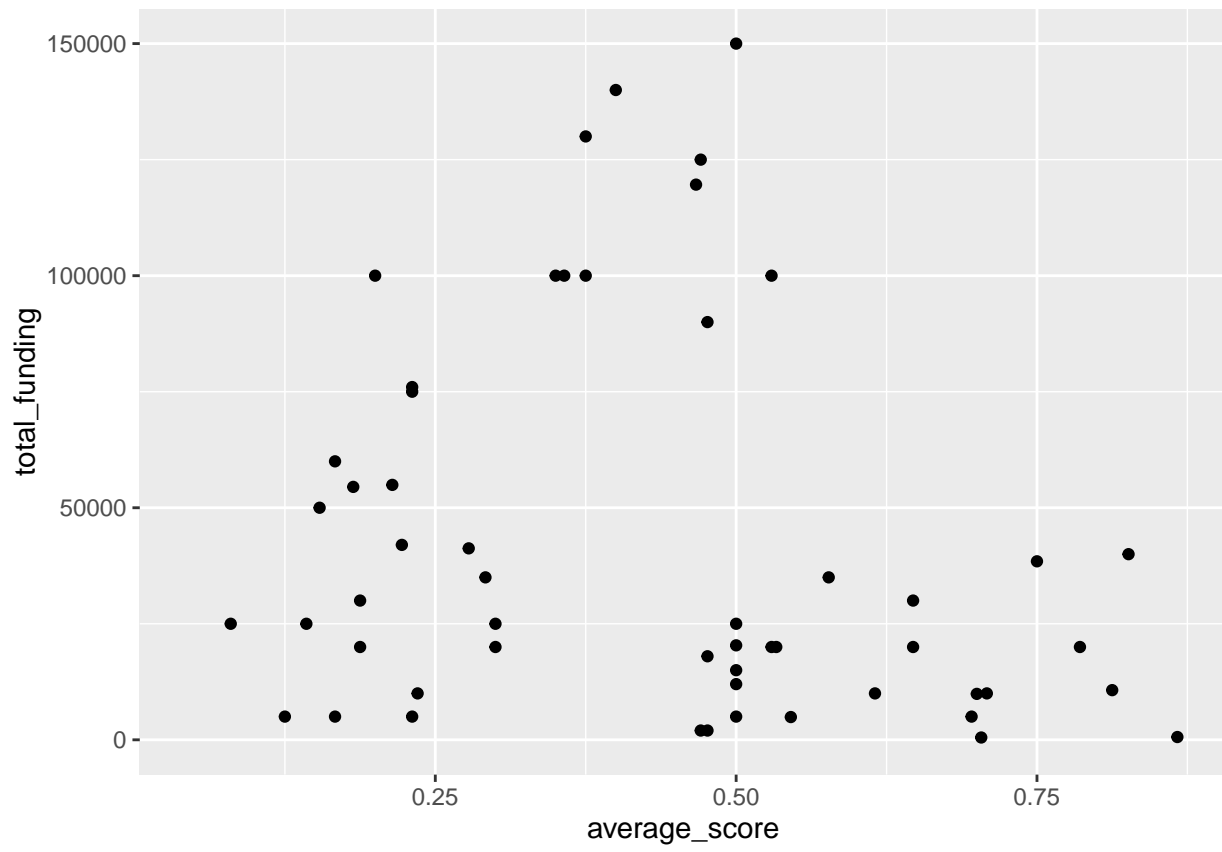
Scatter by Funding



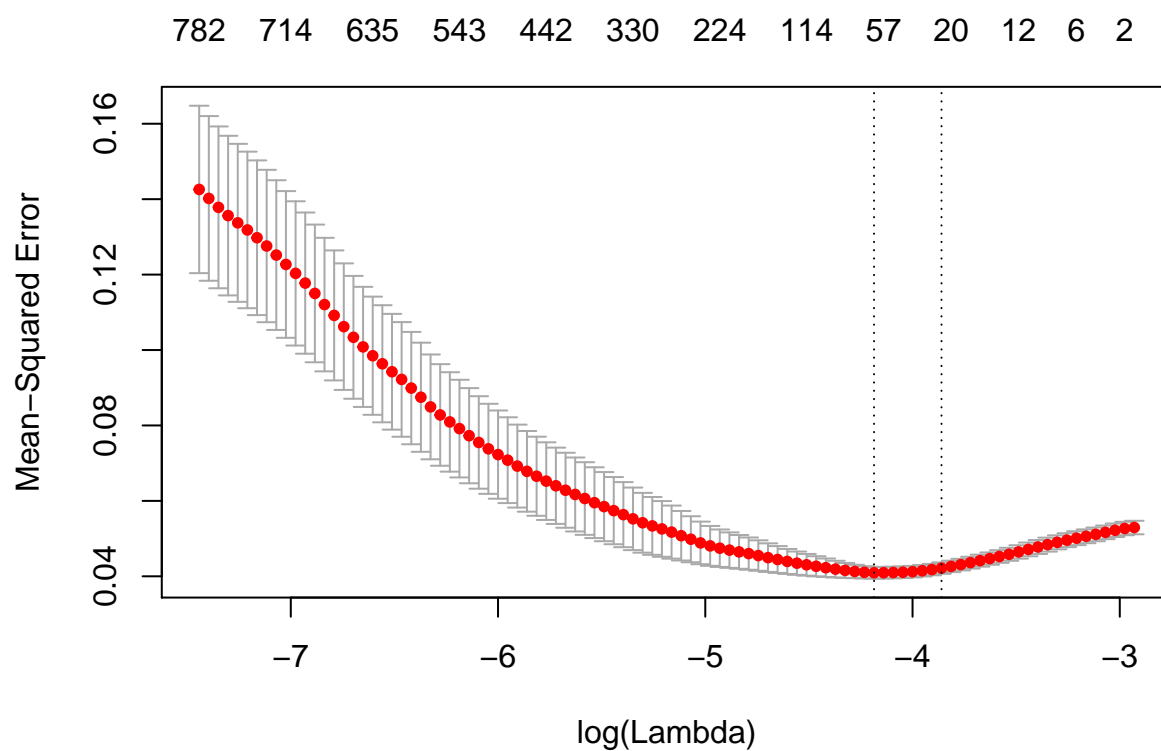
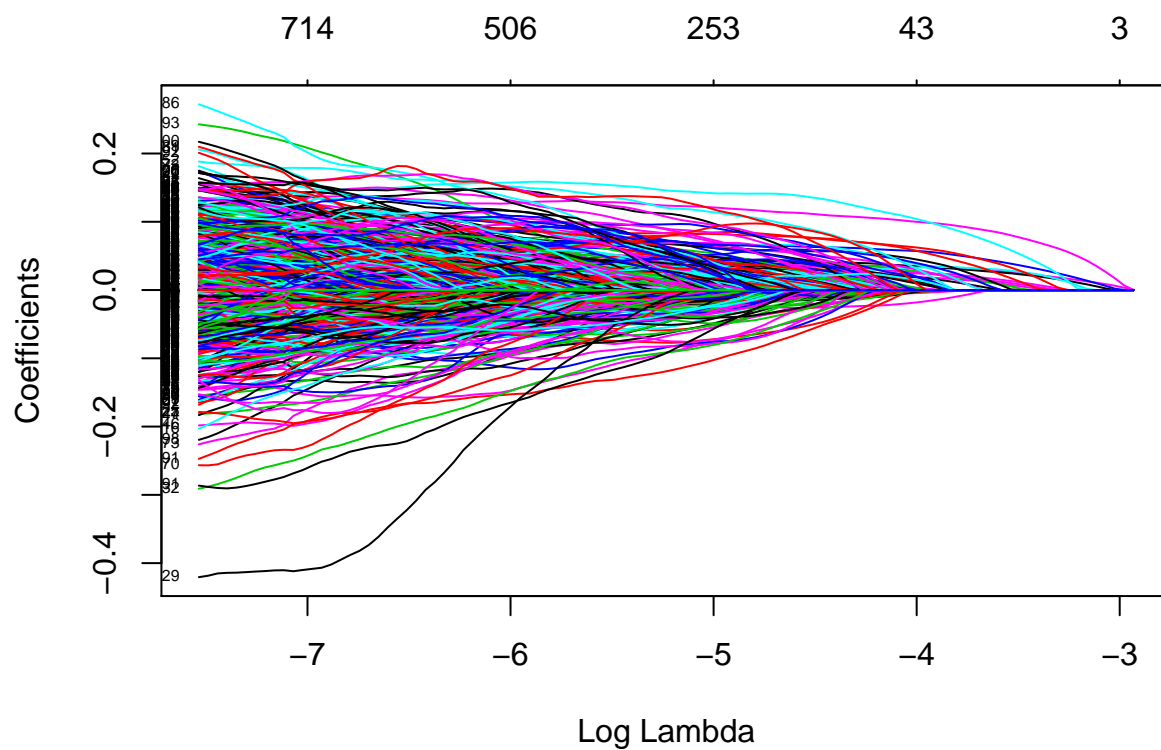
Funding Only Under \$5m



Funding Only Under \$150k



LASSO: Coefficients Selected for Predicting mTurk Score

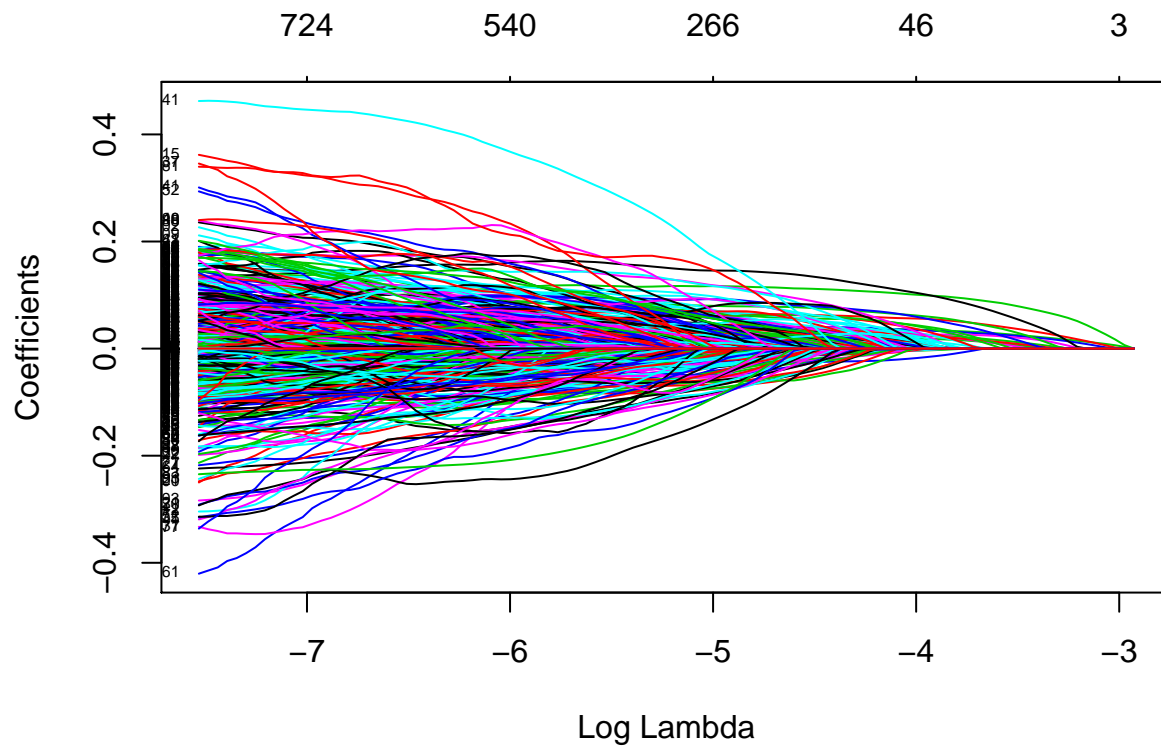


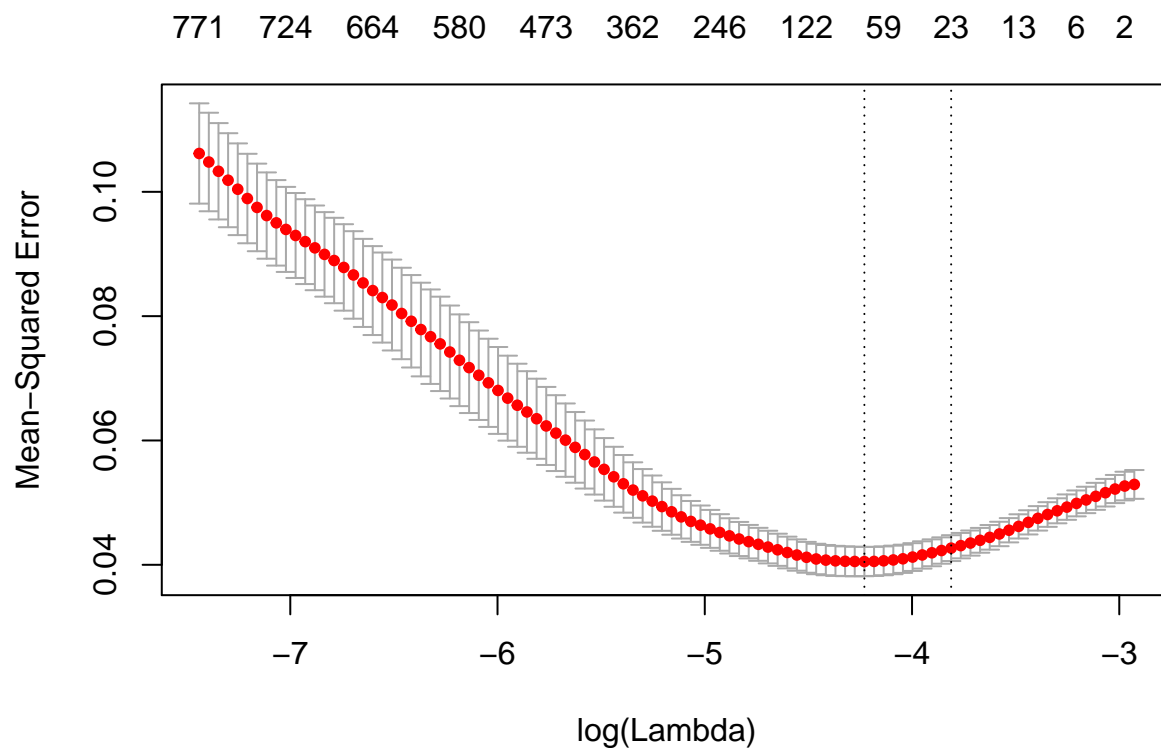
| feature | coefficient |
|---------|-------------|
| leading | -0.0226468 |

| feature | coefficient |
|-------------------------|-------------|
| check | -0.0216003 |
| develops | -0.0151932 |
| provider | -0.0099312 |
| estate | -0.0096087 |
| nairobi | -0.0079032 |
| bank | -0.0062075 |
| company | -0.0058733 |
| range | -0.0057350 |
| exchange | -0.0056053 |
| us | -0.0045229 |
| web | -0.0025581 |
| email | -0.0023633 |
| securities | -0.0019178 |
| management | -0.0005024 |
| payment | -0.0000976 |
| start-up | 0.0000350 |
| problem | 0.0006577 |
| small | 0.0042010 |
| foundation | 0.0042056 |
| education | 0.0046276 |
| women | 0.0048950 |
| rural | 0.0052841 |
| affordable | 0.0054322 |
| discover | 0.0054976 |
| culture | 0.0056752 |
| clean | 0.0059613 |
| networking | 0.0063429 |
| entrepreneurs | 0.0079800 |
| educational | 0.0097438 |
| aims | 0.0103783 |
| programs | 0.0108039 |
| patients | 0.0109766 |
| hub | 0.0124568 |
| teachers | 0.0136621 |
| enhancing | 0.0160979 |
| civil | 0.0165298 |
| awareness | 0.0179764 |
| access | 0.0198939 |
| those | 0.0199360 |
| care | 0.0211143 |
| non-governmental | 0.0228400 |
| create | 0.0242199 |
| health | 0.0244246 |
| entrepreneurship | 0.0246079 |
| mentoring | 0.0290883 |
| farmers | 0.0298075 |
| sustainable | 0.0304325 |
| community | 0.0337536 |
| social | 0.0354877 |
| people | 0.0383671 |
| africans | 0.0402283 |
| leveraging | 0.0402456 |

| feature | coefficient |
|-------------|-------------|
| solving | 0.0494434 |
| non-profit | 0.0498154 |
| schools | 0.0499728 |
| lives | 0.0526264 |
| charity | 0.0559201 |
| students | 0.0596170 |
| households | 0.0671485 |
| youth | 0.0676010 |
| communities | 0.1049662 |
| poverty | 0.1157694 |
| (Intercept) | 0.3769902 |

Including Industry and Country Dummies





| feature | coefficient |
|-----------------|-------------|
| check | -0.0302330 |
| leading | -0.0231018 |
| develops | -0.0195215 |
| estate | -0.0123418 |
| exchange | -0.0105428 |
| provider | -0.0105093 |
| nairobi | -0.0074799 |
| bank | -0.0068205 |
| range | -0.0060258 |
| us | -0.0058456 |
| company | -0.0056538 |
| strong | -0.0054918 |
| web | -0.0054361 |
| choice | -0.0028606 |
| fields | -0.0027876 |
| payment | -0.0023795 |
| email | -0.0021938 |
| securities | -0.0019158 |
| management | -0.0007039 |
| to | 0.0000947 |
| problem | 0.0008410 |
| model | 0.0008607 |
| together | 0.0021354 |
| better | 0.0023344 |
| start-up | 0.0023577 |
| Medical | 0.0023631 |
| scale | 0.0024696 |
| supporting | 0.0028985 |

| feature | coefficient |
|-------------------------|-------------|
| women | 0.0037211 |
| foundation | 0.0042086 |
| sustainability | 0.0056864 |
| clean | 0.0060142 |
| rural | 0.0060770 |
| where | 0.0068092 |
| small | 0.0076831 |
| education | 0.0080206 |
| affordable | 0.0081007 |
| networking | 0.0085703 |
| entrepreneurs | 0.0089360 |
| culture | 0.0090728 |
| issues | 0.0125909 |
| discover | 0.0131153 |
| educational | 0.0136013 |
| aims | 0.0136341 |
| programs | 0.0149778 |
| hub | 0.0166272 |
| teachers | 0.0172473 |
| patients | 0.0175248 |
| awareness | 0.0193514 |
| access | 0.0194529 |
| sustainable | 0.0206119 |
| create | 0.0210863 |
| those | 0.0217797 |
| enhancing | 0.0220815 |
| care | 0.0229351 |
| health | 0.0237363 |
| entrepreneurship | 0.0263220 |
| non-governmental | 0.0277096 |
| civil | 0.0301446 |
| farmers | 0.0307755 |
| community | 0.0347820 |
| social | 0.0348505 |
| mentoring | 0.0372480 |
| people | 0.0384805 |
| africans | 0.0425604 |
| leveraging | 0.0434901 |
| schools | 0.0514159 |
| lives | 0.0527515 |
| non-profit | 0.0537077 |
| solving | 0.0569494 |
| students | 0.0592418 |
| charity | 0.0616732 |
| youth | 0.0687629 |
| households | 0.0709173 |
| communities | 0.1065834 |
| poverty | 0.1184648 |
| (Intercept) | 0.3753861 |

Simple Regressions on Funding

Total Funding

| | Estimate | Std. Error | t value | Pr(> t) |
|----------------|------------|------------|---------|----------|
| (Intercept) | 908401.7 | 1811978 | 0.50 | 0.62 |
| average_score | -1352347.6 | 2276293 | -0.59 | 0.55 |
| countryKenya | 1054687.8 | 1756010 | 0.60 | 0.55 |
| countryNigeria | 1667930.2 | 1712524 | 0.97 | 0.33 |
| countryUganda | -231872.9 | 2248331 | -0.10 | 0.92 |

| | Estimate | Std. Error | t value | Pr(> t) |
|--------------------|------------|------------|---------|----------|
| (Intercept) | 455624.5 | 2395610 | 0.19 | 0.85 |
| average_score | 1129629.3 | 8880932 | 0.13 | 0.90 |
| I(average_score^2) | -2695142.5 | 9321165 | -0.29 | 0.77 |
| countryKenya | 1081468.6 | 1759396 | 0.61 | 0.54 |
| countryNigeria | 1699504.8 | 1716924 | 0.99 | 0.32 |
| countryUganda | -179297.1 | 2256880 | -0.08 | 0.94 |

Limited to under \$150k in funding (807 of 862 observations)

| | Estimate | Std. Error | t value | Pr(> t) |
|----------------|----------|------------|---------|----------|
| (Intercept) | 4844.65 | 1853.31 | 2.61 | 0.01 |
| average_score | -2107.46 | 2307.68 | -0.91 | 0.36 |
| countryKenya | -1253.47 | 1786.01 | -0.70 | 0.48 |
| countryNigeria | -1411.65 | 1741.41 | -0.81 | 0.42 |
| countryUganda | -412.34 | 2275.65 | -0.18 | 0.86 |

| | Estimate | Std. Error | t value | Pr(> t) |
|--------------------|-----------|------------|---------|----------|
| (Intercept) | 1369.24 | 2443.46 | 0.56 | 0.58 |
| average_score | 16817.44 | 8998.10 | 1.87 | 0.06 |
| I(average_score^2) | -20447.25 | 9398.31 | -2.18 | 0.03 |
| countryKenya | -1059.49 | 1784.07 | -0.59 | 0.55 |
| countryNigeria | -1172.17 | 1740.82 | -0.67 | 0.50 |
| countryUganda | 24.22 | 2279.19 | 0.01 | 0.99 |

Controlling for country and industry

| | Estimate | Std. Error | t value | Pr(> t) |
|-----------------------------|-----------|------------|---------|----------|
| (Intercept) | -1748.88 | 2612.00 | -0.67 | 0.50 |
| average_score | 15129.59 | 9430.50 | 1.60 | 0.11 |
| I(average_score^2) | -16563.93 | 9878.27 | -1.68 | 0.09 |
| Logistics | -4098.27 | 7594.38 | -0.54 | 0.59 |
| Small.and.Medium.Businesses | 19910.98 | 6340.69 | 3.14 | 0.00 |

| | Estimate | Std. Error | t value | Pr(> t) |
|-------------------------|-----------|------------|---------|----------|
| Hospitality | 13796.43 | 6040.08 | 2.28 | 0.02 |
| Delivery | -1946.42 | 8761.26 | -0.22 | 0.82 |
| Mobile | 1841.50 | 2691.34 | 0.68 | 0.49 |
| E.Commerce | 3959.83 | 2511.75 | 1.58 | 0.12 |
| Property.Management | 401.30 | 13862.53 | 0.03 | 0.98 |
| Fashion | -926.28 | 5180.37 | -0.18 | 0.86 |
| Internet | -1017.35 | 2677.18 | -0.38 | 0.70 |
| Social.Media | -215.17 | 3714.53 | -0.06 | 0.95 |
| Mobile.Advertising | -3666.53 | 9868.07 | -0.37 | 0.71 |
| Internet.of.Things | 601.39 | 18948.54 | 0.03 | 0.97 |
| Agriculture | 4247.23 | 2937.81 | 1.45 | 0.15 |
| Information.Technology | 3655.31 | 3182.40 | 1.15 | 0.25 |
| Information.Services | -1428.91 | 9951.45 | -0.14 | 0.89 |
| Customer.Service | -1703.49 | 13903.58 | -0.12 | 0.90 |
| Travel | 3777.66 | 5059.18 | 0.75 | 0.46 |
| Tourism | -4332.45 | 9702.58 | -0.45 | 0.66 |
| Training | 26857.45 | 8761.07 | 3.07 | 0.00 |
| Corporate.Training | -7102.93 | 6976.92 | -1.02 | 0.31 |
| Financial.Services | 752.91 | 3991.73 | 0.19 | 0.85 |
| Payments | 253.43 | 8417.96 | 0.03 | 0.98 |
| Location.Based.Services | 20103.64 | 10616.03 | 1.89 | 0.06 |
| Beauty | -11997.33 | 13384.49 | -0.90 | 0.37 |
| News | -618.28 | 3194.99 | -0.19 | 0.85 |
| Search | -2947.96 | 6202.56 | -0.48 | 0.63 |
| Shopping | 1544.91 | 9562.64 | 0.16 | 0.87 |
| Price.Comparison | 11517.34 | 17865.28 | 0.64 | 0.52 |
| Furniture | 2155.52 | 13918.36 | 0.15 | 0.88 |
| Education | 815.25 | 2622.51 | 0.31 | 0.76 |
| Professional.Services | -7803.32 | 18440.35 | -0.42 | 0.67 |
| Real.Estate | 2952.14 | 4788.14 | 0.62 | 0.54 |
| Publishing | -2528.95 | 3764.93 | -0.67 | 0.50 |
| Consulting | 7617.93 | 3605.36 | 2.11 | 0.04 |
| Outsourcing | 5583.54 | 8095.58 | 0.69 | 0.49 |
| Social.Recruiting | 5731.84 | 11025.15 | 0.52 | 0.60 |
| Curated.Web | -64.37 | 3333.25 | -0.02 | 0.98 |
| Communities | 507.91 | 4129.84 | 0.12 | 0.90 |
| Non.Profit | 666.46 | 3041.14 | 0.22 | 0.83 |
| Infrastructure | 365.62 | 6310.25 | 0.06 | 0.95 |
| Venture.Capital | 247.78 | 6682.43 | 0.04 | 0.97 |
| Manufacturing | 568.12 | 8596.16 | 0.07 | 0.95 |
| Hardware | -8118.08 | 9257.90 | -0.88 | 0.38 |
| Software | 8663.31 | 2290.43 | 3.78 | 0.00 |
| Banking | 18.67 | 5912.86 | 0.00 | 1.00 |
| Credit | 49.99 | 15135.94 | 0.00 | 1.00 |
| Social.Entrepreneurship | -5968.92 | 3195.58 | -1.87 | 0.06 |
| Business.Intelligence | 1104.39 | 11280.04 | 0.10 | 0.92 |
| Oil.and.Gas | 933.83 | 13860.73 | 0.07 | 0.95 |
| Legal | -1236.82 | 13909.18 | -0.09 | 0.93 |
| E.Commerce.Platforms | -2567.65 | 16310.07 | -0.16 | 0.87 |
| Health.Care | 9608.50 | 3857.48 | 2.49 | 0.01 |
| Business.Development | -4479.20 | 14021.43 | -0.32 | 0.75 |
| Finance | -489.29 | 6013.71 | -0.08 | 0.94 |

| | Estimate | Std. Error | t value | Pr(> t) |
|-------------------------------|-----------|------------|---------|----------|
| FinTech | -126.03 | 9590.25 | -0.01 | 0.99 |
| PaaS | -3685.98 | 16979.64 | -0.22 | 0.83 |
| Innovation.Management | 50009.52 | 14947.00 | 3.35 | 0.00 |
| Energy | 5807.33 | 3112.96 | 1.87 | 0.06 |
| Retail | -618.28 | 4849.34 | -0.13 | 0.90 |
| Apps | -2670.79 | 4090.35 | -0.65 | 0.51 |
| Electronics | 480.51 | 7209.02 | 0.07 | 0.95 |
| Employment | -218.45 | 13848.53 | -0.02 | 0.99 |
| Consumer | -227.15 | 19552.79 | -0.01 | 0.99 |
| Waste.Management | 45807.54 | 8068.50 | 5.68 | 0.00 |
| Telecommunications | 8356.43 | 5115.30 | 1.63 | 0.10 |
| Advertising | 6560.76 | 3482.10 | 1.88 | 0.06 |
| Restaurants | -2552.10 | 10290.30 | -0.25 | 0.80 |
| B2B | -1078.31 | 8675.75 | -0.12 | 0.90 |
| Solar | 1424.04 | 7315.77 | 0.19 | 0.85 |
| Communications.Infrastructure | 654.19 | 9876.61 | 0.07 | 0.95 |
| Music | 7232.74 | 5243.88 | 1.38 | 0.17 |
| Billing | -7304.80 | 22115.80 | -0.33 | 0.74 |
| Content | -2463.95 | 16580.21 | -0.15 | 0.88 |
| mHealth | -11409.68 | 10778.26 | -1.06 | 0.29 |
| Marketing.Automation | -2140.06 | 10564.18 | -0.20 | 0.84 |
| Child.Care | 673.48 | 14689.40 | 0.05 | 0.96 |
| Clean.Energy | 1801.68 | 7367.61 | 0.24 | 0.81 |
| Children | 10105.96 | 18010.43 | 0.56 | 0.57 |
| Gaming | 29135.12 | 11253.34 | 2.59 | 0.01 |
| Market.Research | 9147.05 | 8145.55 | 1.12 | 0.26 |
| Video | -35.53 | 12248.64 | 0.00 | 1.00 |
| Web.Development | -446.19 | 6795.77 | -0.07 | 0.95 |
| Web.Design | -30.71 | 6627.18 | 0.00 | 1.00 |
| Recycling | -45970.03 | 12639.67 | -3.64 | 0.00 |
| Water | 959.67 | 7158.77 | 0.13 | 0.89 |
| Classifieds | 72759.10 | 10112.20 | 7.20 | 0.00 |
| CRM | -1416.73 | 10892.42 | -0.13 | 0.90 |
| Farmers.Market | 2966.49 | 11390.45 | 0.26 | 0.79 |
| Analytics | 5046.11 | 13183.76 | 0.38 | 0.70 |
| SaaS | -8576.49 | 8337.01 | -1.03 | 0.30 |
| Broadcasting | -137.06 | 13843.01 | -0.01 | 0.99 |
| Social.Media.Marketing | 4804.74 | 23880.01 | 0.20 | 0.84 |
| Digital.Media | -2918.24 | 6851.39 | -0.43 | 0.67 |
| Local | 1457.16 | 15635.62 | 0.09 | 0.93 |
| Automotive | 1030.47 | 5939.04 | 0.17 | 0.86 |
| Advice | 7502.22 | 19766.51 | 0.38 | 0.70 |
| Transportation | -1505.47 | 5915.78 | -0.25 | 0.80 |
| Impact.Investing | -516.20 | 10337.86 | -0.05 | 0.96 |
| Photo.Sharing | 91.46 | 14285.80 | 0.01 | 0.99 |
| Handmade | -4626.48 | 14026.43 | -0.33 | 0.74 |
| Art | -519.37 | 13844.88 | -0.04 | 0.97 |
| Project.Management | 918.64 | 12171.00 | 0.08 | 0.94 |
| Enterprise.Software | 2976.35 | 5363.19 | 0.55 | 0.58 |
| Recruiting | -11463.69 | 9533.82 | -1.20 | 0.23 |
| Big.Data | 17790.73 | 13421.21 | 1.33 | 0.19 |
| Blogging.Platforms | -1031.14 | 10126.79 | -0.10 | 0.92 |

| | Estimate | Std. Error | t value | Pr(> t) |
|---------------------------|-----------|------------|---------|----------|
| Sports | 64.30 | 9805.77 | 0.01 | 0.99 |
| Web.Hosting | 5952.30 | 5885.11 | 1.01 | 0.31 |
| Medical | -7168.01 | 8471.82 | -0.85 | 0.40 |
| Digital.Entertainment | -4505.65 | 15858.01 | -0.28 | 0.78 |
| Teenagers | 2188.10 | 15071.08 | 0.15 | 0.88 |
| Messaging | -1794.30 | 5987.11 | -0.30 | 0.76 |
| Audio | -9141.95 | 12333.79 | -0.74 | 0.46 |
| Media.and.Entertainment | -2385.91 | 19350.58 | -0.12 | 0.90 |
| Video.Streaming | 3797.06 | 13260.69 | 0.29 | 0.77 |
| Mobile.Payments | -2576.88 | 6425.69 | -0.40 | 0.69 |
| Gift.Card | 250.91 | 13845.76 | 0.02 | 0.99 |
| Cloud.Computing | -13006.79 | 12533.68 | -1.04 | 0.30 |
| Events | -1424.13 | 7043.00 | -0.20 | 0.84 |
| Loyalty.Programs | -5542.99 | 15987.05 | -0.35 | 0.73 |
| Public.Relations | 143.03 | 4703.07 | 0.03 | 0.98 |
| Brand.Marketing | -3183.24 | 8316.82 | -0.38 | 0.70 |
| Parenting | 16951.76 | 16571.51 | 1.02 | 0.31 |
| Identity.Management | -3616.27 | 14632.47 | -0.25 | 0.80 |
| Crowdfunding | -1671.55 | 14632.75 | -0.11 | 0.91 |
| SEO | -4345.15 | 11034.68 | -0.39 | 0.69 |
| Private.Social.Networking | 2406.27 | 14817.12 | 0.16 | 0.87 |
| Career.Planning | 9362.94 | 18035.45 | 0.52 | 0.60 |
| Consumer.Electronics | -1157.33 | 7456.96 | -0.16 | 0.88 |
| Skill.Assessment | 2127.51 | 15766.41 | 0.13 | 0.89 |
| EdTech | -20.50 | 8623.92 | 0.00 | 1.00 |
| Gamification | -4170.63 | 22292.83 | -0.19 | 0.85 |
| X3D.Technology | -7766.25 | 14756.23 | -0.53 | 0.60 |
| Security | -266.44 | 10473.90 | -0.03 | 0.98 |
| Wireless | -6261.10 | 12667.86 | -0.49 | 0.62 |
| Human.Resources | -6229.42 | 8919.97 | -0.70 | 0.49 |
| College.Campuses | 3749.17 | 13282.90 | 0.28 | 0.78 |
| Universities | -1021.14 | 9462.36 | -0.11 | 0.91 |
| SMS | -1180.25 | 9202.73 | -0.13 | 0.90 |
| Text.Analytics | 2545.27 | 16860.04 | 0.15 | 0.88 |
| Guides | -3745.14 | 14740.08 | -0.25 | 0.80 |
| VoIP | -5821.19 | 21557.80 | -0.27 | 0.79 |
| Printing | -419.88 | 10649.62 | -0.04 | 0.97 |
| Shoes | -83970.86 | 19161.36 | -4.38 | 0.00 |
| Crowdsourcing | 23899.24 | 16724.63 | 1.43 | 0.15 |
| Local.Advertising | 2957.99 | 14515.19 | 0.20 | 0.84 |
| Commercial.Real.Estate | -2577.18 | 14608.12 | -0.18 | 0.86 |
| Insurance | -469.81 | 13853.12 | -0.03 | 0.97 |
| Construction | -218.45 | 13848.53 | -0.02 | 0.99 |
| Collaboration | -9991.49 | 14338.24 | -0.70 | 0.49 |
| Cryptocurrency | -32.71 | 13847.79 | 0.00 | 1.00 |
| Developer.APIs | -7384.02 | 10065.52 | -0.73 | 0.46 |
| Food.Processing | -1161.00 | 10253.36 | -0.11 | 0.91 |
| Fitness | -7255.71 | 11587.03 | -0.63 | 0.53 |
| Charity | -796.89 | 14118.74 | -0.06 | 0.96 |
| Bitcoin | -6227.63 | 11950.36 | -0.52 | 0.60 |
| Android | 33498.01 | 10156.61 | 3.30 | 0.00 |
| Farming | -2073.18 | 9906.75 | -0.21 | 0.83 |

| | Estimate | Std. Error | t value | Pr(> t) |
|---------------------|-----------|------------|---------|----------|
| Ticketing | -3863.73 | 14687.70 | -0.26 | 0.79 |
| Coworking | -659.13 | 8059.92 | -0.08 | 0.93 |
| Incubators | 332.18 | 6661.31 | 0.05 | 0.96 |
| Computer | -2665.91 | 16984.34 | -0.16 | 0.88 |
| Video.on.Demand | 3019.83 | 18508.17 | 0.16 | 0.87 |
| IaaS | 93375.71 | 16317.67 | 5.72 | 0.00 |
| Cyber.Security | 1452.70 | 12126.32 | 0.12 | 0.90 |
| Service.Industry | 40715.82 | 19101.08 | 2.13 | 0.03 |
| Task.Management | -297.69 | 18438.55 | -0.02 | 0.99 |
| Social.Bookmarking | 75374.96 | 13850.08 | 5.44 | 0.00 |
| Energy.Storage | -6011.33 | 19794.82 | -0.30 | 0.76 |
| Journalism | -403.70 | 14213.27 | -0.03 | 0.98 |
| ICT | -18354.17 | 19520.47 | -0.94 | 0.35 |
| Leisure | -5452.58 | 14788.28 | -0.37 | 0.71 |
| Taxi.Service | 1776.94 | 24714.58 | 0.07 | 0.94 |
| Cloud.Data.Services | -17161.66 | 20026.01 | -0.86 | 0.39 |
| Industrial | -11105.70 | 19977.36 | -0.56 | 0.58 |
| Graphic.Design | -1320.24 | 13941.60 | -0.09 | 0.92 |
| Developer.Tools | 985.56 | 15679.18 | 0.06 | 0.95 |
| Organic | -1355.11 | 13942.14 | -0.10 | 0.92 |
| Coffee | -1302.23 | 13941.34 | -0.09 | 0.93 |
| countryKenya | -1235.42 | 1827.40 | -0.68 | 0.50 |
| countryNigeria | -1008.28 | 1804.65 | -0.56 | 0.58 |
| countryUganda | -207.40 | 2382.30 | -0.09 | 0.93 |